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ABSTRACT

This report documents the objectives, methodology, and products of a study to develop criteria and standards for measuring the impact of vocational education demonstration projects. Section I provides background and describes the study's purpose and products. Section II summarizes the methodology used to conduct activities. Details of the literature review, panel meeting, case studies, and workshops are discussed. Section III summarizes the literature review conducted to assess the state of the art in measuring the effectiveness of educational innovations and to identify factors related to program success. The literature bibliography is included. Section IV highlights the conclusions of three advisory panel meetings used to discuss and provide input into project products. Section V summarizes the case studies of eight demonstration projects selected to assess the usefulness and practicality of the draft monograph. Section VI is an overview of the monograph developed to propose a set of criteria for measuring the impact of vocational education demonstration projects and to discuss the activities and functions of key individuals in achieving improved impact. Section VII summarizes three workshops held to introduce the monograph to state and local vocational education administrators. Appendixes include case study forms, workshop materials, and proposal review criteria. (YLB)

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FINAL REPORT

"THE DEVELOPMENT OF CRITERIA TO MEASURE THE EXTENT OF IMPLEMENTATION AND THE EFFECTIVENESS OF DEMONSTRATION PROJECTS IN VOCATIONAL EDUCATION"

Contract No. 300-78-0574

Submitted To:

BUREAU OF OCCUPATIONAL AND ADULT EDUCATION
DEPARTMENT OF EDUCATION
WASHINGTON, D.C.

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ABSTRACT

The major product of this study was a monograph which presents a set of criteria and standards for evaluating the impact of vocational education demonstration projects. The criteria and standards were developed to directly address the requirements in the Program Improvement Section of Title I, Part B, Subpart 2 (Programs of National Significance) of the Vocational Education Act of 1963, as amended, which states that:

> "The Commissioner shall not make a grant...unless the applicant can demonstrate a reasonable probability that such grant will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after termination of such grant."

The same requirement is called for in Title I, Part A, Section 131(a) which authorizes a state-administered research program and Section 133(a) which authorizes a state-administered curriculum development program.

Three criteria focus on whether the project resulted in "...improved teaching techniques or curriculum materials..." These are:

- Demonstration Impact which assesses short-term program effects on demonstration project participants;
- Long-Term Impact which assesses longer-term program effects on demonstration project participants; and
- Continuation/Adoption Impact which assesses program effects on participants when the program is replicated, e.g., at continuing and/or adopting sites.

Three criteria focus on whether the project "...will be used in a substantial number of classrooms or other learning situations within five years after termination of such grant." These are:

- Dissemination Activities which assesses the quality and content of dissemination materials and strategies during the grant period;
- Efforts Toward Institutionalization which assesses the extent to which efforts are being made to institutionalize project products into the ongoing program; and
- Utilization which assesses the extent of implementation or spread of the program within five years after termination of the grant.

The monograph also discusses the roles and accomplishments of planners, implementers, evaluators, disseminators, and monitors in improving project effectiveness. Alternative time frames for demonstration projects are also explored. The monograph appendices include proposal review criteria, a bibliography, and a glossary of terms.

Input into the monograph included the results of an extensive literature review, three separate panels of experts representing various constituencies within the vocational education community, and case studies of eight geographically-dispersed demonstration projects. Following publication, three workshops on the use of the monograph were held across the country for state and local level vocational education administrators.

How widely the monograph is used will depend, in part, on the leadership role that federal and state funding agencies take in program improvement. More specifically, use of the monograph will depend on whether the role of demonstrations in overall program improvement is clarified, encouraged, and funded. It will also depend on whether or not funding agencies require evidence of project effectiveness during and after the grant period that addresses the federal legislation.

EXECUTIVE SUMMARY

The major purpose of this study was to develop and disseminate a monograph for improving and measuring the effectiveness of vocational education demonstration projects. Demonstration projects in vocational education are part of the R&D to full utilization continuum. As a component of the dissemination process following R&D, demonstrations are specifically designed to serve as outward expressions and evaluations of educational practices with the intent of ultimately disseminating information about them to encourage their adoption at other schools or school systems.

A. BACKGROUND

Studies conducted by the General Accounting Office* and a committee of the National Academy of Sciences** have concluded that vocational education projects funded by the U.S. Office of Education have not had documented, widespread impact. Because of these and other findings, significant additions to the Vocational Education Act of 1963 were incorporated into the Educational Amendments for further research and development in vocational education. The amendments include a sharpened demand for specific, identifiable benefits to result from R and D expenditures. Indeed, at several points the new legislation requires that grants and contracts be made only when the applicant demonstrates a reasonable probability that improved products or practices will result which will be used in a substantial number of classrooms or other learning situations within five years after the termination date of the federal grant award.

B. PURPOSE OF CONTRACT

In response to the conclusion reached by the General Accounting Office and the National Academy of Science and to the legislative mandate, this study was funded by the U.S. Office of Education to develop criteria to measure the effectiveness and the implementation of vocational education demonstration projects. More specifically, the study had the following objectives:

- to define criteria and standards for measuring project effectiveness;
- to develop proposal review criteria;

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*General Accounting Office. Career Education: Status and Needed Improvements. Washington, D.C. General Accounting Office, Division of Manpower and Welfare, 1976.

**National Academy of Science's Committee on Vocational Education Research and Development. Assessing Vocational Education Research and Development, 1976.

- to produce a monograph for improving and measuring the effectiveness of vocational education projects; and

- to disseminate products developed under the contract.

C. CONTRACT PRODUCTS

The major product of the contract was a monograph titled Vocational Education Demonstrations: Measuring Impact and Improving Effectiveness.* In addition to publishing the monograph, three workshops were held to introduce the monograph and discuss its contents.

Two significant interim reports were produced which supported the development of the monograph. These reports were a literature review and case study results:

- Literature Review for Development to Criteria to Measure the Impact of Vocational Education Demonstration Projects. Arlington, Virginia, Development Associates, Inc. February 12, 1979; and

- Development of Criteria to Measure the Extent of Implementation and the Effectiveness of Demonstrations in Vocational Education: Case Studies. Arlington, Virginia: Development Associates, Inc. January 31, 1980.

D. METHODOLOGY

Contract activities began with a literature review to establish the state of the art in measuring successfully-implemented and documented projects. From the literature review, a draft set of criteria, standards, and documentation for interim and final acceptable evidence of project impact were developed. (Interim acceptable evidence is that evidence which should be expected during the last phase of external federal support and final acceptable evidence is that evidence which should be expected within five years after the termination of federal support.) These were reviewed and suggestions were made for revisions by an advisory panel representing various constituencies in the field of vocational education. Following the panel meeting, the interim and final evidence were revised and proposal review criteria were developed. These products were reviewed and revised by a second panel.

*Fleischman, H.L. and Willette, J.L., Vocational Education Demonstrations: Measuring Impact and Improving Effectiveness. Arlington, Virginia: Development Associates, Inc., March 1980.

Over the next several months, a draft of the monograph was written which included the interim and final acceptable evidence, the proposal review criteria, and a chapter on improving project effectiveness. The draft monograph was then field tested utilizing input from eight demonstration projects. Case studies were prepared and the monograph was revised based on this field test experience. This latter draft was then reviewed by a third panel and by USOE. Following this review, the monograph went through its final revision before it was printed. The completed monograph was then presented to vocational education administrators and planners in three separate workshops across the country.

E. LITERATURE REVIEW

The literature review was conducted to assess the state of the are in measuring the effectiveness of educational innovations and to identify factors related to program success. Theoretical and organizational works, journal articles, third-party evaluations, internal evaluations, technical papers, reports, and monographs were among the documents reviewed. The resulting conclusion was that a considerable amount of useful information exists in the area, but what is known is not synthesized nor consistently or widely applied. In measurement, evaluators concentrate on immediate impact rather than long term impact or the widespread use of innovations. Eventual program success depends on a number of factors which cover the entire span of a project's life.

Program effectiveness has been evaluated using measures of program outcomes, dissemination, continuation, and adoption. Program outcomes generally refer to isntructional outcomes among students, teachers, other school personnel, parents, and potential employers. This includes the acquisition of knowledge, change in attitudes, or the acquisition of skills. In addition to instructional outcomes, other outcome criteria may be changes in behavior, perceived success, or systems changes. However, by far the most often used are instructional outcome measures. Although measures of dissemination, continuation, and adoption do exist, they are not as widely used nor do they have the level of sophistication found in instructional outcome measures. In addition, the collection of follow up data on first generation students from the host demonstration site and student outcome data from adopting sites is rare. Few evaluations have attempted to determine whether persons exposed to innovative programs have continued to exhibit the desired behavioral changes, whether the innovations are being utilized in other locations, or the resultant effects in adopting sites. The over-reliance on instructional outcome measures to assess immediate impact is probably due, in part, to three factors: (1) the comparative difficulty of quantifying other effects; (2) the additional expense involved in collecting such data; and (3) the lack of commitment or perceived responsibility for collecting additional data once the demonstration phase of the program has been terminated.

The literature abounds with suggestions for improving the effectiveness of innovative programs. Factors mentioned most often as being related to project success are adequate planning, a supportive institutional setting, and sound management which includes the use of the program evaluation as a management tool.

The most effective projects have good formative and summative evaluation plans built into the project design. Formative evaluation is used to assist in the management of the project. Having a summative evaluation plan in the early stages of the project provides for the collection of baseline data on both project participants and a comparison group. The end products of the formative and summative evaluations are to improve the effects of the project through sound management, improve the measurement of project success, and facilitate replicability through the documentation of project strategies which lead to success. The most effective projects are designed with longevity in mind and provisions are made early for phasing in additional financial support once federal funding has terminated. In addition, a viable dissemination plan is included in the project design and dissemination and eventual adoption at other sites are stated as program goals. Finally, adequate records of project participants and potential adopters are kept to facilitate followup.

F. PANEL MEETINGS

Three separate panel meetings were held during the contract period to review and provide input to contract products. The panels were comprised of various constituencies in the vocational education community. As such, they included federal, state, and local administrators, researchers, and practitioners. Some panelists participated in more than one meeting.

The first panel meeting was held on December 19 and 20, 1978. The objective of this panel meeting was to discuss and provide input into the development of definitions of criteria, standards, and documentation for interim and final acceptable evidence of the impact of vocational education demonstration projects. During the two days the panel reached consensus on a number of points, some of which are listed below:

- interim evidence should include an assessment of instructional outcomes at the demonstration site;
- interim evidence should include the attainment of dissemination objectives;
- the objectives of the demonstration project should relate to the state plan and this should be a criterion for funding;

- final evidence should include the extent of utilization of the demonstration project product at the original site and/or adopting sites;
- it is unreasonable to collect instructional outcome from adopting sites; and
- it is unreasonable to establish national national standards.

The second panel met June 19-20, 1979 to review a more finalized version of the interim and final acceptable evidence, the proposal review criteria, and an outline of the monograph. Some of the most important conclusions are listed below:

- primary outcomes are the most important intended outcomes and should be stated as such in the proposal, i.e., the proposal should state why certain things are being done;
- essential to measuring effectiveness is the ability to attribute outcomes to the intervention which means a comparison group should be used wherever necessary;
- the concept of adoptions should be used rather than adaptions so that changes in the target group can be attributed to the intervention;
- instructional outcomes should be measured at adopting sites in order to assess whether the program has the intended effects on target group(s) when replicated; and
- national minimum standards should be set for each criterion because allowing each state to set their own is paramount to no standards at all.

The panel also thought adequate planning was essential for project success.

The third panel was divided into two groups. The first group met on February 15, 1980 while the second group met on February 20. Since the purpose of this panel was to review a draft fo the monograph, it was felt that small groups would be more productive. The first group concentrated on reviewing that part of the monograph which addresses methods for improving project effectiveness. The second group critiqued the overall presentation and format. Some of their conclusions were:

- the introduction should explain that R&D and demonstration serve two purposes;
- certain important statements should be underlined;
- the state should be included in the planning;
- local, state, and national dissemination should be built into the RFP;
- the project director and funding agency should agree on the selection of an evaluator; and
- one of the functions of the monitor is to be sure the evaluation is being carried out and that it is being carried out in an effective manner.

G. CASE STUDIES

Case studies of eight demonstration projects were conducted to assess the usefulness and practicality of the monograph before it was finalized. Each case study was designed to provide a general description of the project; present the documentation of interim and final evidence where collected; discuss the documentation which were not collected and its appropriateness of inappropriateness for the project; and discuss the roles and accomplishments of planners, implementers, evaluators, monitors, and disseminators during the planning/start-up, implementation, and demonstration/dissemination phases of the project.

Four of the projects selected for the case studies were federally-administered and four were administered by states. Of the federally-administered projects, two were still receiving federal funds while two had completed the federal funding phase. A similar breakdown was used for the state-administered projects.

At each demonstration site, project proposals, project reports, evaluation plans and reports, dissemination materials, the original grant application instructions, proposal review criteria, and other existing documents and records were used to record data regarding project history, experience, and impact. In addition, the project director and other staff members were interviewed to obtain the specific evaluation and process data not available from existing reports and documents. Evaluation data not available from reports or from staff personnel were obtained from the third-party evaluator. A separate interview with the evaluator was then held to collect additional data on reactions to and the feasibility of collecting the proposed documentation for interim and final evidence and information on contributions to project success. Project monitors at SEAs were also interviewed to obtain data on their roles and the roles of their organizations in the planning and implementation of the projects.

Finally, a sample of adopting organizations were contacted in person or by phone, depending on their location. Information was collected from a maximum of five adopting organizations for each demonstration project. This maximum number was not reached at all eight projects,however, since some projects were just completing the grant period and had not reached the point at which their products had been adopted widely.

The case studies experience generally confirmed the relevancy and feasibility of the information presented in the monograph. The validation process highlighted the importance of the following points:

- clarifying and measuring primary objectives;
- stating dissemination objectives;
- using a third-party evaluator; and
- using techniques of good management.

The experience also confirmed the usefulness of the proposal review criteria.

Modifications that were made in the monograph due to findings from the case studies are:

- to suggest that projects requiring comparison groups in their evaluation design provide enough time for the proper selection of these groups;
- to suggest that projects provide time during the first year of the grant period for pilot testing the evaluation design, instruments, and procedures used for the selection of comparison groups; and
- to change the standard for the interim criterion of efforts toward institutionalization from "presence of efforts toward institutionalization" to "efforts are being made for continued funding and staff training."

Other important findings showed:

- the value of planning grants;
- the relative inability of projects to establish quality adoptions with only one year of dissemination activities; and
- the impracticability of expecting reliable and valid target group impact data the first year of project operations.

H. MONOGRAPH

Input from the literature review, the panel meetings, and the case studies were used in developing the monograph. As stated earlier, the purpose of the monograph is to assist in improving and measuring the effectiveness of vocational education demonstration projects. The monograph is directed at project planners, implementers, disseminators, internal and third-party evaluators, and funding agency monitors. It is hoped that the document will help each of these groups to:

- assess and improve procedures being used to plan, implement, evaluate, and monitor demonstration projects in order to improve their ability to document improvements in classrooms and other learning situations, and to ensure their continuation after external support phases have ended;
- assess and improve procedures being used to disseminate information about successful projects, to encourage adoption of these projects, and to document any such adoptions which occur; and
- assess and improve procedures being used to select and fund demonstration projects.

As an aid to readers, the introduction to the monograph discusses how the monograph is organized and why and how it was developed. Chapter II presents an evaluation model containing criteria, standards, and documentation required for presenting evidence of project effectiveness. By applying the criteria and standards and collecting the documentation specified in Chapter II, project implementers, evaluators, and monitors will be able to make decisions concerning continued project funding. They will also be able to provide information on the impact and utilization of programs to federal, state, and local funding agencies.

Chapter III discusses the roles of various individuals in improving project effectiveness and in collecting the documentation specified in the evaluation model presented in Chapter II. Within Chapter III the demonstration project is divided into a pre-grant period for needs assessment and proposal development; a grant period for project start-up, implementation, and dissemination; and a post-grant period for collection of evidence of impact and utilization. Within each of these periods, the roles of planners, implementers, evaluators, disseminators, and monitors in improving effectiveness are discussed. Paragraphs or sections within the chapter are flagged to call attention to important points for each of these groups. Key statements are also underlined throughout the monograph for additional emphasis. Following Chapter III, a summary and a list of references are presented.

Appendix A contains a glossary of terms which are used in the monograph. Appendix B contains a set of proposal review criteria which may be used by funding agencies in reviewing demonstration project proposals. The review criteria are keyed to the points discussed in the Chapter III as being important accomplishments during the pre-grant period. Finally, Appendix C contains a bibliography arranged by topic area to assist the reader further.

The criteria, standards, and documentation which define interim and final acceptable evidence of project impact that were developed under this contract are included in the monograph. Interim acceptable evidence, the evidence that should be available during the last phases of the demonstration grant period, are defined below:

- Demonstration Impact - the short-term effects of the demonstration project on the target group(s);
- Dissemination Activities - the quality and extent of the dissemination activities of a demonstration project; and
- Efforts Toward Institutionalization - the extent of attempts being made to ensure program longevity after completion of the grant period.

Final acceptable evidence, the evidence that should be available within five years after completion of the grant period, are defined as:

- Utilization - the extent of utilization or spread of of the program;
- Long-Term Impact - the extent of long-term effects of the program on the target group(s); and
- Continuation/Adoption Impact - the extent of short-term effects of the program on target group(s) when the program is replicated.

The criteria proposed for measuring impact address the requirement in the Program Improvement Section of Title I, Part B, Subpart 2 (Programs of National Significance) of the Vocational Education Act of 1963, as amended, which states that:

> "The Commissioner shall not make a grant...unless the applicant can demonstrate a reasonable probability that such grant will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after termination of such grant."

The same requirement is called for in Title I, Part A, Section 131(a) which authorizes a state-administered research program and Section 133(a) which authorizes a state-administered curriculum development program.

The criteria Demonstration Impact, Long-Term Impact, and Continuation/Adoption Impact assess effects of the intervention on program participants. These criteria address the section of the legislation that states "...that such grant will result in improved teaching techniques or curriculum materials..". The interim criteria Dissemination Activities and Efforts Toward Institutionalization are necessary but not sufficient measures of project success. They each contribute to the spread of a program as measured by Utilization, a criterion of final evidence. Utilization addresses the section of the legislation concerning use "in a substantial number of classrooms or other learning situations within five years after termination of such grant."

Standards and documentation are proposed for each criterion. The standards proposed in the monograph are minimum. More specific standards can be set by funding agencies. When more specific standards are set, the standards by which a project will be judged should be set forth in the project guidelines or request for proposal issued by the funding agency.

In order to discuss the activities and functions of the key individuals in the planning, implementation, and evaluation of a demonstration project, a three-year grant period was assumed in the monograph. This time period was selected since it has been used extensively by the U.S. Office of Education and a number of state agencies. However, other time frames for demonstration projects should also be considered. A project's length should be determined by its scope and/or complexity, and the funding agency should avoid a system that lacks the flexibility to accommodate these variations. Alternative time frames are discussed in the monograph.

Although the monograph focuses on demonstration projects, there is potential for broader use. A large portion of what is said is appropriate for other types of projects, including research and development. The criteria proposed for assessing impact were designed to be technically sound measures of program effectiveness while the methods for improving impact address the organizational structure and timely interactions of project activities which increase chances of success. Therefore, they are common to the needs of a variety of program types.

I. WORKSHOPS

Three workshops were held to introduce the monograph to state and local level vocational education administrators. The workshops were held in Oakland, California; Arlington, Virginia; and Nashville, Tennessee.

Overall, 53 persons representing 38 states attended the one and one-half day workshops. Aside from an introduction and a few presentations, participants spent most of their time in small and large group problem solving sessions built around a fictitious demonstration project called SOLMOD (Solar Energy Model). At the end of each workshop, participants were asked to complete and return a workshop evaluation form. The purpose of the evaluation form was to help improve subsequent workshops. Of the 53 workshop participants, 41 returned completed forms. Some of the more interesting responses are summarized below.

Seventy-seven percent of the participants stated that they found the small and large group discussions built around the fictitious SOLMOD demonstration project to be a very useful workshop activity. They reported that these discussions gave them an opportunity to explore alternative approaches to a realistic problem with participants from other states. The discussions also provided an opportunity to share ideas concerning the issues covered in the monograph, and learn from the viewpoints and experiences of others.

Additional questions were asked in an effort to get some ideas of how much the monograph will be used. Eighty-three percent of the respondents said that the information presented was relevant to their needs and that they plan to train others in the use of the monograph or suggest that they get a copy. All but one person said they expect to use the monograph.

It appears that there is considerable variation among the states in their level of sophistication concerning program evaluation. The responses to the questions on the workshop evaluation form indicated that some states are already using most of the concepts in the monograph. However, a few states are so far removed from the concepts presented in the monograph that they do not perceive them as relevant. Other states are presently in the process of incorporating some of the monograph concepts into their procedures. Finally, there was some confusion among workshop participants about the purpose of a demonstration project. Some states use demonstrations but call them by another name. Other states move from R&D directly to dissemination without demonstration. Considerable time was spent in the workshops defining what a demonstration is and discussing the advantages of having demonstration projects for certain types of innovative programs. As a result of these discussions, many workshop participants thought they would consider using demonstration projects in the future.

To a large extent, how widely the monograph is used will depend on the leadership role the Department of Education takes in program improvement. More specifically, extensive use of the monograph will depend on whether the role of demonstrations in overall program improvement is clarified, encouraged, and funded. It will also depend on whether or not funding agencies require evidence of project effectiveness that addresses the federal legislation.

I. INTRODUCTION

The purpose of this report is to document the objectives, methodology, and products of a study to develop criteria and standards for measuring the impact of vocational education demonstration projects. Demonstration projects in vocational education are part of the R&D to full utilization continuum. They are specifically designed to serve as outward expressions and evaluations of educational practices with the intent of ultimately disseminating information about them to encourage their adoption at other schools or school systems.

A. BACKGROUND

Studies conducted by the General Accounting Office* and a committee of the National Academy of Sciences** have concluded that vocational education demonstration projects funded by the U.S. Office of Education have not had documented, widespread impact. Because of these and other findings, significant additions to the Vocational Education Act of 1963 were incorporated into the Educational Amendments of 1976. While sustaining the long-standing legislative commitment to further research and development in vocational education, the amendments include a sharpened demand for specific, identifiable benefits to result from R&D expenditures. Indeed, at several points the new legislation requires that grants and contracts be made only when the applicant demonstrates a reasonable probability that improved products or practices will result which will be used in a substantial number of classrooms or other learning situations within five years after the termination date of the federal grant award.

Federal support for research and development in vocational education may be traced to the Smith-Hughes Act of 1917 and the George-Barden Act of 1946. The major initiatives, however, were begun in the 1960's. The Vocational Education Act of 1963 explicitly provided substantial funding for research and development, and the amount of resources and scope of activity was expanded with the Vocational Education Amendments of 1968.

Although research projects have been supported through several sections of the Act, demonstration projects have been almost entirely undertaken under Part D of the 1968 Amendments (which

* General Accounting Office. Career Education: Status and Needed Improvements. Washington, DC. General Accounting Office, Division of Manpower and Welfare, 1976.

** National Academy of Science's Committee on Vocational Education Research and Development. Assessing Vocational Education Research and Development, 1976.

were further amended by the Education Amendments of 1976). Historically, funds for these demonstration projects were divided between federally-administered and state-administered projects, with the amount of funding available per state determined on a formula basis. On the federally-administered side, three-year grants have been awarded to a small number of projects in each state to demonstrate career education. On the other hand, the states differed widely in the use of their funds, with some having made relatively large grants to support one or two demonstration projects while others made numerous smaller grants. In addition, the state-administered projects have included vocational education as well as career education.

Since the inception of the demonstration program effort, USOE has been concerned with the evaluation and diffusion of project results. Each year the federally-administered projects have been required to submit written evaluation reports and funds have been allocated for this effort. A national evaluation of the program was conducted and a handbook was developed to assist project directors with evaluations of their individual projects.* Similarly, there has been federal support for studies regarding the diffusion of vocational education innovations, with some efforts examining the issue of change and continuation at host sites, and others focusing on the extent to which products and practices are known by and used at secondary organizations or replication sites.** While each of these studies have been important, there still remains, however, the basic conclusion reached by GAO and NAS, and the mandate contained in the new amendments to the Vocational Education Act.

B. PURPOSE OF CONTRACT

In response to the conclusion reached by the General Accounting Office and the National Academy of Science and to the legislative mandate, this study was funded by the U.S. Office of Education to develop criteria to measure the effectiveness and the implementation of vocational education demonstration projects. More specifically, the study had the following objectives:

- To define and specify what will be considered interim and final acceptable evidence that a demonstration project has resulted in improved teaching techniques or curriculum materials that have been used in a substantial number of classrooms or other learning situations within five years after termination of the

* Development Associates, Inc. Evaluation and Educational Decision-Making: A Functional Guide to Evaluating Career Education, September 1975.

** Hull, W. L., and Bina, J. V., The Influence of Selected Organizational and Administrative Variables on Continued and Extended Use of Exemplary Projects in Vocational Education. Center for Vocational Education, Ohio State University, 1977.

grant or contract; (interim acceptable evidence is that evidence which should be expected during the last phase of external federal support and final acceptable evidence is that evidence which should be expected within the five years after the termination of federal support);

- To generate and recommend criteria for the review of demonstration project applications which are predictive of the ability of the applicant to achieve the interim and final acceptable evidence specified in response to the above objective;

- To produce a monograph for improving and measuring the impact of vocational education demonstration projects, for use by program planners, implementers, monitors, evaluators, and disseminators; and

- To diffuse the products of this project to appropriate curriculum coordination centers, state department of education personnel (including RCU directors), and local education agency personnel (including local directors of federally-administered vocational education demonstration projects) through the preparation of the monograph and the conduct of training workshops.

C. CONTRACT PRODUCTS

The major product of this contract was a monograph, titled Vocational Education Demonstrations: Measuring Impact and Improving Effectiveness.* The monograph includes:

- Criteria, standards, and documentation for interim and final acceptable evidence of project effectiveness;

- Roles and accomplishments of planners, implementers, evaluators, disseminators, and monitors in increasing project effectiveness; and

- Proposal review criteria.

In addition to publishing the monograph, three workshops were held to introduce the monograph and discuss its contents.

Two significant interim reports were produced which supported the development of the monograph. These reports were a literature review and case study results:

* Fleischman, H. L. and Willette, J. L., Vocational Education Demonstrations: Measuring Impact and Improving Effectiveness. Arlington, Virginia: Development Associates, Inc., March 1980.

- Literature Review for Development of Criteria to Measure the Impact of Vocational Education Demonstration Projects. Arlington, Virginia: Development Associates, Inc., February 12, 1979;

- Development of Criteria to Measure the Extent of Implementation and the Effectiveness of Demonstrations in Vocational Education: Case Studies. Arlington, Virginia: Development Associates, Inc., January 31, 1980.

The following sections of this report summarize the methodology used in this contract and the major products which were developed.

II. METHODOLOGY

Contract activities began with a literature review to establish the state of the art in measuring successfully implemented and documented projects. From the literature review, a draft set of criteria, standards, and documentation for interim and final acceptable evidence of project impact were developed. These were reviewed and suggestions were made for revisions by an advisory panel representing various constituencies in the field of vocational education. Following the panel meeting, the interim and final evidence were revised and proposal review criteria were developed. These products were reviewed and revised by a second panel.

Over the next several months, a draft of the monograph was written which included the interim and final acceptable evidence, the proposal review criteria, and a chapter on improving project effectiveness. The draft monograph was then field tested utilizing input from eight demonstration projects. Case studies were prepared and the monograph was revised based on this field test experience. This latter draft was then reviewed by a third panel and by USOE. Following this review, the monograph went through its final revision before it was printed. The completed monograph was then presented to vocational education administrators and planners in three separate workshops across the country.

Details of the literature review, panel meetings, case studies, and workshops are discussed below.

A. LITERATURE REVIEW

The literature review was conducted to serve two purposes: (1) to establish the state of the art in measuring the effectiveness of educational innovations; and (2) to identify project characteristics which are related to success. The product of this activity provided the basis for the specification of acceptable evidence of project impact and the preparation of the monograph.

Since the literature review was designed for a specific purpose, an information classification system was established early in the review process so that the abstractors could conduct a content analysis of the documents as they were being reviewed, thus providing an ongoing inventory of the subject matter. Only the material directly relevant to this project was abstracted and this was done in considerable detail if it appeared appropriate. The subject categories of the classification system that were chosen as most relevant to the needs of the study were: General,

Project Characteristics, Dissemination Strategies, Dissemination Measures, Outcome Measures, Continuation, and Adoption. The General category contained mostly theoretical literature. Project Characteristics and Dissemination Strategies considered process variables which are ultimately related to project success. The categories Outcome Criteria, Dissemination Measures, Continuation, and Adoption were perceived as sources of impact criteria.

The resulting document from this activity was entitled Literature Review for Development of Criteria to Measure the Impact of Vocational Education Demonstration Projects, February 12, 1979.

In this document, the State of the Art in Measuring Program Effectiveness was addressed first, followed by a summary of Factors Related to Program Success, and a Summary section. Then a matrix showing the materials abstracted by subject category was presented along with a bibliographic listing of materials. Finally, the abstracted literature was presented. A summary of the review is presented in Section III of this report.

B. PANEL MEETINGS

Three separate panel meetings were held during the contract period to review and provide input to contract products. The panels were comprised of various constituencies in the vocational education community. As such, they included federal, state, and local administrators, researchers, and practitioners. Some panelists participated in more than one meeting. Following is a list of the panelists and the organizations they represent:

Thomas Bogetich, California Advisory Council on Vocational Education, Sacramento, California.

Ralph Bregman, National Advisory Council on Vocational Education, Washington, DC.

Clarence Burdett, Director of Vocational Education, Charleston, West Virginia.

James Dasher, State Department of Education, Little Rock, Arkansas.

Henry David, National Institute of Education, Washington, DC.

James Doyle, Wayne - Westland Community Schools, Wayne, Michigan.

Edward Fernandez, Las Cruces School District #2, Las Cruces, New Mexico.

Don Gentry, State Director of Vocational Education, Indianapolis, Indiana.

Dean Griffin, American Vocational Association, Arlington, Virginia.

H. Eugene Hall, Regional Educational Service Center, Cresaptown, Maryland.

William L. Hull, National Center for Research in Vocational Education, Columbus, Ohio.

Bill Lafferty, Education Service Center, San Antonio, Texas.

Ronald D. McCage, Coordinator, Research and Development Unit, Vocational-Technical Division, Office of Education, Springfield, Illinois.

Joe D. Mills, Director, Division of Vocational Technical Education, Tallahassee, Florida.

Monty Multanen, State Director of Vocational Education, Salem, Oregon.

Anthony Pascal, RAND Corporation, Santa Monica, CA.

James Reid, National Association of State Directors of Vocational Education, Arlington, Virginia.

Alice Scates, Office of Evaluation and Dissemination, USOE, Washington, DC.

Susan Sherman, National Academy of Sciences, Washington, DC.

Primo Toccafondi, Westmont Hilltop School District, Johnstown, Pennsylvania.

First Panel Meeting

The first panel meeting was held on December 19 and 20, 1978. The objective of this panel meeting was to discuss and provide input into the development of definitions of criteria, standards,

and documentation for interim and final acceptable evidence of the impact of vocational education demonstration projects. A preliminary draft of both interim and final acceptable evidence of project impact was provided to each of the panelists before the meeting. This was done to provide a framework for discussion during the meeting.

Second Panel Meeting

The second panel met June 19-20, 1979, to review a more finalized version of the interim and final acceptable evidence, the proposal review criteria, and an outline of the monograph.

Third Panel Meeting

The third panel was divided into two groups. The first group met on February 15, 1980, while the second group met on February 20. Since the purpose of this panel was to review a draft of the monograph, it was felt that this small group arrangement would be more productive. The first group concentrated on reviewing Chapter III of the monograph which addresses methods for improving project effectiveness. The second group critiqued the overall presentation and format of the monograph.

Materials were sent to panelists prior to each meeting along with a statement of the purpose of the meeting. This was done to provide a framework for the discussion. The results of these panel meetings are presented in Section IV of this report.

C. CASE STUDIES

Case studies of eight federally and state administered demonstration projects were conducted to assess the usefulness and practicality of the monograph before it was completed. Each case study was designed to provide a general description of the project; present the documentation of interim and final evidence where collected; discuss the documentation which were not collected and its appropriateness or inappropriateness for the project; and discuss the roles and accomplishments of planners, implementers, evaluators, monitors, and disseminators during the planning/start-up, implementation, and demonstration/dissemination phases of the project.

The case studies were not designed to provide a history or description of each project to serve as a separate product of our effort. Rather, they were supportive documents prepared to aid in the development of the monograph.

1. Major Study Questions

In order to respond to the case study goals, the following major study questions were developed:

Measurement of Impact

- What criteria were used to evaluate the impact or success of the project?
- What data or documentation were collected?
- What evaluation methodology was used?
- What standards were set for judging impact or success?
- What were the findings?
- How are above criteria, documentation, and standards related to the criteria, documentation, and standards proposed in the monograph?
- For the data not collected, why weren't they collected? How could the data be collected? What findings may be expected?
- What are the implications for the monograph?

Improvement of Impact

- Who was involved in the planning phase, the implementation phase, and the demonstration/dissemination phase?
- What was accomplished during each phase that particularly led to success or improved impact?
- What was each person's role and responsibilities with respect to the accomplishments?
- What aspects of the planning, implementation, and demonstration/dissemination phases were particularly successful?
- How were actual roles, responsibilities, and accomplishments related to those discussed in the monograph?
- What are the implications for the monograph?

2. Sample

Four of the projects selected for the case studies were federally-administered and four were administered by states.

Of the federally-administered projects, two were still receiving federal funds while two had completed the federal funding phase. A similar breakdown was used for the state-administered projects. A table showing this distribution is presented below:

	Administered By	
	USOE	States
Still Receiving Federal Funding	2	2
Federal Funding Phase Completed	2	2

In selecting the case study projects, USOE staff and state Research Coordinating Unit (RCU) Directors were asked to nominate those projects which were successful in meeting their objectives. For the completed projects, nominations were sought of projects which had positive primary outcomes (student outcomes, teacher outcomes, etc.), had met their dissemination objectives, were continuing at the demonstration site, and whose products were adapted by other school districts or schools. For projects still receiving federal funding, nominations were sought of projects which had, at least, positive primary outcomes. Overall, 25 projects were nominated by USOE staff and six randomly selected RCU Directors.

From the nominated projects, eight were finally chosen. These eight were selected in order to include both USOE-and state-administered projects, projects at different stages of completion, projects from different parts of the country, and projects of various substantive types. These projects were:

Federally-Administered: Operational

- Demonstration of NIE's Experienced-Based Career Education Program
  Portland, Connecticut

- Experienced-Based Career Education Program in Cooperative Vocational Education and Work Experience
  Norman, Oklahoma

Federally-Administered: Completed

- Wayne Design for Career Education
  Wayne, New Jersey

- Career Ladder Infusion Model Building
  Garden Grove, California

State-Administered: Operational

- Experienced-Based Career Education for Mentally Disabled Students
  Fort Dodge, Iowa

- Solar Energy in the Building Trades
  Falmouth, Maine

State-Administered: Completed

- FACIT: Florida's Approach to Competency-Based Individual Teaching
  Tallahassee, Florida

- Preferred Learning Styles of Vocational Education Students
  Appleton, Wisconsin

3. Data Sources

Project proposals, project reports, evaluation plans and reports, dissemination materials, the original grant application instructions, proposal review criteria and other existing documents and records were used to record data regarding project history, experience, and impact. In this matter, the time and effort of the project directors and their staff in collecting these data was minimized. Beyond this, the project director or another knowledgeable staff member were interviewed to obtain the specific evaluation and process data not available from existing reports and other documents that were needed to assess the usefulness of the monograph. All in all, each piece of information was collected from one individual at each of the eight projects. For example, the evaluation data not available from reports or from staff personnel were obtained from the third-party evaluator. A separate interview with the evaluator was then held to collect additional data on reactions to and the feasibility of collecting the proposed documentation for interim and final evidence and information on contributions to project success. The project monitors at the SEA and USOE were also interviewed to obtain data on their roles and the roles of their organizations in the planning and implementation of the projects. In this case also, we interviewed only one

monitor for each project or eight individuals altogether. Using these data collection strategies, we minimized the response burden of all concerned and reduced duplication of effort as much as possible.

Finally, a sample of adopting organizations were contacted in person or by phone, depending on their location. We collected information from a maximum of five adopting organizations per project. This maximum number was not reached at all eight projects, however, since some projects were just completing the federal funding period, and had not reached the point at which their products had been adopted widely. Therefore, not all of the projects were able to cite five organizations as being possible adopters. In any case, a maximum sample size of five adopters for each of the eight projects provided sufficient information for our purposes and also kept the response burden to a reasonable level. FEDAC clearance was obtained for this data collection effort.

4. Instrumentation

Based on the major study questions and the data sources which were identified, the following instruments were designed to collect the required data:

Project Information Form

This instrument was the major source of data for validating the usefulness and practicality of the monograph. It was designed to elicit information on:

- Project background, objectives, services and operations;
- Evaluation data collected and their relationship to the proposed interim and final acceptable evidence of project impact; and
- Roles and accomplishments of planners, implementers, monitors, evaluators, and disseminators that were related to project success.

Project reports and other documents were used to supply basic information called for by the Project Information Form. Information not available from these sources were obtained through an interview with the Project Director or other individuals identified as having the most knowledge of the particular area of inquiry.

Third-Party Evaluator Interview Guide

This instrument was designed for the purpose of collecting data on:

- Limitations placed on evaluation due to constraints imposed by the project, LEA, SEA, USOE, or others;
- Reactions to and feasibility of collecting documentation for interim and final acceptable evidence of project impact; and
- Roles and accomplishments which led to project success.

The third-party evaluator for each project was interviewed to obtain these data.

Project Monitor Interview Guide

This instrument was used to collect information on:

- Contributions of the monitors to the success of the project;
- Roles and accomplishments of the monitors which led to the institutionalization and spread of the project; and
- Characteristics of the project which led to success.

One individual from the monitoring organization (SEA) for each project was interviewed to obtain the above data.

Interview Guide for Adopting Organizations

This instrument was used to collect information on the process by which the adopting organization learned about the demonstration product, how the decision was made to adapt the product, the extent of implementation of the product, and the impact on its target audience. Data were collected from up to five adopting sites for each of the eight demonstration projects included in this effort. To the extent possible, interviews were held in person; however, in cases where travel was significant, interviews were conducted by telephone.

The complete instruments may be found in Appendix A.

D. WORKSHOPS

Upon completion of the monograph, a series of workshops were held for federal, state, and local vocational education administrators

to acquaint them with the contents of the monograph. Several weeks before the workshops were held, letters signed by Daniel B. Dunham, Deputy Commissioner for Occupational and Adult Education. were sent to State Directors of Vocational Education, State RCU Directors, and the Executive Directors of State Vocational Education Advisory Councils. The letter described the purpose of the workshops and invited the states to send appropriate personnel. The letter also stated that one representative from each state and territory would receive travel reimbursement and per diem under the contract. A flier describing the workshops was enclosed with each letter. A copy of the letter and fliers appear in Appendix B of this report.

Exhibit 1 lists the workshop sites, states invited, and states which sent representatives. Some states sent more than one person. Of the 57 states and territories, representatives of 38 attended. Overall, 53 individuals attended the workshops.

Three DA staff members conducted the workshops. Two of these were the senior staff on the project and authors of the monograph. The third person was an experienced workshop facilitator who also had experience on the project as a case studies researcher and writer.

The workshops were one and a half days in duration. A combination of lecturettes and small and large group discussion was used. It was felt that this approach would encourage interaction among workshop participants, thus giving participants an opportunity not only to be exposed to the substantive content of the monograph, but also to provide an opportunity for them to learn from each other. Exhibit 2 shows the workshop agenda.

Two large rooms were used for each workshop. One room, used for the lecturettes and large group discussions, contained a large U-shaped table for seating all participants. A podium, flip chart easel, and chalk board were located at the front of the room. Workshop participants entered this room, registered, and received a name tag. Each person's workshop supplies were in place around the table. These supplies included a copy of the monograph, a pocket folder containing a pad of paper, a DA brochure, and a pen and pencil.

The second room contained five round tables for seating up to five persons. This room was used for small group discussions. Individuals from the same state were encouraged not to sit at the same table. This was done to maximize the exchange of new ideas within each group.

A simulated vocational education demonstration project called SOLMOD (Solar Energy Model) and four related exercises were designed for the workshops. The purpose of the simulation and the exercises was to provide participants with hands-on experience working with the monograph. The simulation and exercises appear in Appendix B.

EXHIBIT 1

WORKSHOP ATTENDANCE

Oakland, California April 23-24, 1980		Arlington, Virginia May 6-7, 1980		Nashville, Tennessee May 20-21, 1980	
States Invited	Number of Individuals Attending	States Invited	Number of Individuals Attending	States Invited	Number of Individuals Attending
Alaska	0	Connecticut	0	Alabama	1
Arizona	1	Delaware	1	Arkansas	1
California	3	District of Columbia	3	Florida	2
Colorado	1			Georgia	1
Hawaii	1	Maine	1	Illinois	3
Idaho	1	Massachusetts	0	Indiana	0
Montana	1	Maryland	2	Iowa	1
Nevada	1	Michigan	1	Kansas	1
North Dakota	0	New Hampshire	1	Kentucky	1
Oregon	1	New Jersey	1	Louisiana	2
South Dakota	0	New York	1	Minnesota	1
Utah	1	North Carolina	1	Mississippi	0
Washington	1	Ohio	1	Missouri	1
Wyoming	0	Pennsylvania	1	Nebraska	1
American Samoa	0	Puerto Rico	0	New Mexico	0
Guam	0	Rhode Island	1	Oklahoma	0
Trust Territory of the Pacific	0	Vermont	1	South Carolina	0
		Virginia	5	Tennessee	3
Northern Mariana Islands	0	Virgin Islands	0	Texas	0
		West Virginia	0	Wisconsin	1
TOTAL: 10 States; 12 people		14 States; 21 people		14 States; 20 people	

EXHIBIT 2
WORKSHOP AGENDA

DAY ONE

9:00 A.M.	Introduction (Introduction to Monograph and Workshop Agenda.)
9:30	Demonstration Project Phasing and Interim Acceptable Evidence - Presentation.
10:15	COFFEE BREAK
10:30	Final Acceptable Evidence - Presentation.
10:50	Summary of Interim and Final Evidence.
11:00	Introduction to Simulation and Exercise #1.
11:10	Group Activity: Exercise #1.
12:00	LUNCH
1:15 P.M.	General Discussion of Exercise #1.
1:50	Summary Discussion
2:00	Introduction to Exercise #2.
2:05	Group Activity: Exercise #2.
2:30	General Discussion of Exercise #2.
3:05	Summary Discussion.
3:15	COFFEE BREAK
3:30	Improving Project Effectiveness - Presentation.
4:00	Introduction to Exercise #3.
4:05	Group Activity: Exercise #3.
4:45	Instructions for Completing Expense Vouchers.

DAY TWO

9:00 A.M.	Review and Introduction to Day 2.
9:10	General Discussion of Exercise #3.
9:15	Summary Discussion.
10:00	COFFEE BREAK
10:15	Introduction to Exercise #4.
10:20	Group Activity: Exercise #4.
11:00	General Discussion of Exercise #4.
11:30	Summary of Discussion.
11:40	Summarization of Workshop.
11:50	Evaluation Forms.
12:00	ADJOURN
1:15 P.M.	Informal Discussions.

The first morning began with an introduction to the workshop. The participants then briefly discussed how they have been measuring project effectiveness in their states. Following this, the criteria, standards, and documentation for the interim and final acceptable evidence of project effectiveness contained in the monograph were presented and discussed. By mid-afternoon, participants had completed Exercises #1 and #2 using the SOLMOD simulation in their small groups, and discussed their conclusions in the large group. A lecturette on improving effectiveness was then presented. This was followed by work on Exercises #3 and #4, which continued into the morning of the second day. At the end of the workshop, participants were asked to complete and return a workshop evaluation form. This form also appears in Appendix B. Some improvements were made after the first and second workshops as a result of the evaluations. The workshops adjourned at noon of the second day. DA staff were available following lunch for consultation.

In the following sections of this report, the results of major project activities are discussed.

III. LITERATURE REVIEW SUMMARY

A. STATE OF THE ART IN MEASURING PROGRAM EFFECTIVENESS

The major concern in assessing the state of the art was to focus on criteria for measuring the effectiveness of educational innovations. More specifically, this means documenting criteria which have been used for: (1) measuring what have been considered successfully-implemented and documented demonstration projects, and (2) measuring the impact and spread of educational innovations. Criteria for measuring what have been considered successfully-implemented and documented demonstration projects refer to those criteria which provide evidence of success in the project's final demonstration phase. These criteria are covered comparatively extensively in the literature. By contrast, criteria for measuring the impact and spread of educational innovations have received less attention. These criteria address the extent to which educational innovations have had effects beyond the demonstration phase and beyond the demonstration site. The categories from the literature review that address these issues are Outcome Measures, Dissemination Measures, Continuation, and Adoption.

1. Outcome Measures

Outcome measures are the most prevalent criteria used for assessing the success of educational innovations. Outcomes concern direct measures of change on the target population or systems that the innovative program is designed to improve. These vary considerably across projects because of the variation in stated purpose among innovative programs. Outcome criteria include measures of change in students, teachers, school personnel (other than teachers), the school system, and the community-at-large.

Outcomes are primarily used as measures of success at the host site of the innovative project. A survey of the literature indicates that measuring outcomes from adopting sites to assess the effectiveness of the innovation is not a widespread practice. Such measures may be termed second generation outcomes because their purpose is to assess the success of the spread of an innovation by measuring the program outcomes at adopting sites.

Although the literature includes some discussion of the need for followup measures, in reality, little has been done in this area. These measures include various types of comparative longitudinal and time series approaches, among other things, the focus being on long term effects of the project on the target population or system. Of those followup measures discussed in the literature, the most commonly used one is based on the number of students who found jobs as a result of participating in a program. However, the National Academy of Sciences report (1976) considers initial employment as an

inadequate measure of program success. Additional followup measures suggested by the NAS report and by other literature are student opinions of the program, job satisfaction, upward mobility, earnings, employer satisfaction, and extent to which skills learned in the program are being utilized. These measures are not often used because of the expense involved in tracking program participants over time as well as the need for tracking a comparison group to ensure the validity of the findings.

The Joint Dissemination Review Panel also evaluates programs for distribution by the National Diffusion Network on program outcome criteria. Their selections are based primarily on statistically significant student gains which are specifically attributable to the program and program feasibility for the "typical school." Programs having purposes other than cognitive achievement are judged on different criteria but the same logic is applied (Far West Laboratory report, 1978).

Outcome measures that appear in the literature are discussed below.

- Student Outcomes. All of the documents listed under "Outcome Measures" in the literature review subject matrix address student outcomes in some form or another. The criteria cover a range of project-specific student knowledge, skills, or attitudes and a variety of instruments are used to measure these outcomes. Some are standardized measures while others are not.

  In addition to student knowledge/skills/attitudes which are project-specific, other student outcome criteria mentioned in the literature are: (1) the number of students who found jobs as a result of participating in the project (Jacobson and Scheufler, 1978); (2) job satisfaction; (3) continuation of education; (4) job mobility and wages; and (5) the intent to which the project meets needs of various clientele groups (National University Extension Association, 1978).

  Rivlin (1971), Tallmadge (1977), and others emphasize the importance of demonstrating that change has occurred, that the change is significant, and that it is attributable to the project. Reliability and validity, the use of comparison data, and pretest/posttest strategies are also emphasized.

- Teacher Outcomes. Another recurring outcome criterion is a significant change in teacher behavior and attitudes specific to project objectives (Abramson, 1978; Gross, et al., 1971; MacDonald, 1973; Packard and Jovich, 1978; Post, 1978; Rand, 1974-1975; Rosen, et al., 1977; Tallmadge, 1977). Pre/post data were collected from teachers in the study reported by MacDonald (1973). In addition, the teachers kept semi-structured diaries.

- School Outcomes (other than teachers). Changes in staff behavior and attitudes was another outcome criterion mentioned. Excluding teachers, other staff members identified as necessary for implementing change include administrators and counselors (Rosen, et al., 1977). Post (1978) thinks that causing changes in administrative and faculty attitudes throughout the school district is an important function of a demonstration project.

- Outcomes in School Systems. Goodlad (1975) states that evaluation of project impact at the classroom level is not enough. Changes in procedures and attitudes relevant to project objectives should be evident throughout the school organization in order for the project to continue. In most cases, the relevant organization will be the school district, but in other instances, it may be the state educational agency, or the department/school in a university (Gooler and Ely, 1972).

  In the final stages of the demonstration project, procedures and attitudes in the school system should reflect support for project continuance and obstacles to changes required by the project should have been considerably reduced or eliminated.

- Community Outcomes. Community outcomes include changes in the attitudes and behaviors of parents and potential employers. Often these two groups of people are included in project development (Rosen,et al., 1977). In the Weatherford,et al. (1978) study, a parent opinion survey was used to assess community opinions regarding the effectiveness of the program. The Shively and Davis (1978) study surveyed parents and employees for their attitudes towards the program.

- Cost Effectiveness. McKinney (1977) thinks that projects should be able to demonstrate cost effectiveness. However, Rivlin (1971) does not think this criterion can be feasibly considered when program effectiveness is not clear and needs to be evaluated. Harmes (1970) and Hopkins (1976) state that increased efficiency is an important criterion in the change process.

- Percentage of Objectives Achieved. Several studies used percentage of objectives achieved as an outcome criteria (Hamilton and Mitchell, 1978; Harmes, 1970; House, 1973; McKinney, 1977; New Educational Directions, Inc., 1977b; Rand, 1974-1975; Rivlin and Timpane, 1975; Tallmadge, 1977; Thomas, 1978; Villoni, 1978). The objectives should be specific, measurable (McKinney, 1977), and clear (Rivlin and Timpane, 1975). Furthermore, objectives should be aligned with the goals of the program (Harmes, 1970; Thomas, 1978). Evaluation of objectives should include fidelity and difficulty of implementation at the classroom level (Rand, 1974-1975). A shortcoming of this approach is that the stated project objectives may vary in their importance.

2. Dissemination Measures

Dissemination measures are sometimes used as additional indicators of project success and are often stated as program outcomes. However, they are treated separately in this document because of the variability in their use. Although dissemination measures are sometimes used as program outcomes, they are not measures of program effectiveness. Dissemination is a necessary but not sufficient condition for the spread and eventual adoption of an innovation at other than the demonstration site, but is not an end in itself.

Dissemination measures mentioned in the literature consist mostly of documenting the number and kinds of dissemination activities used. They are:

- Number of Organizations and Groups which Attended Presentations. Usually, lists were kept which included the date of presentation, the name of the project staff person presenting, and the name of the organization(s) or group(s) attending. (Carkhuff Associates, Inc., 1978; Jacobson and Scheufler, 1978; Post, 1978; Thomas, 1978).

- Number of Printed Materials that the Project Distributed. Descriptive literature of the project took many forms such as pamphlets, newsletters, brochures, and catalogues. The measure of dissemination usually consisted of a list with the names and addresses of persons who were sent printed material. Some projects kept separate counts of materials distributed by categories such as solicited/unsolicited, in-state/out-of-state, etc. (Carkhuff Associates, Inc., 1978; Cedar Associates, Inc., 1978; Post, 1978; Rand, 1974-1975; Thomas, 1978).

- Number of Visitors to Project. Records were kept of the number of visitors to the project by the organization/group the person represented or by type of visitor, such as parent, teacher, student, etc. (Cedar Associates, 1978; Jacobson and Scheufler, 1978; Thomas, 1978).

- Inclusion in ERIC. Inclusion in ERIC was mentioned most often as a dissemination strategy, but has also been used as a measure of dissemination (Cedar Associates, Inc., 1978).

- Number and Name of Task Forces in Which Project Staff Participated. Reporting on the number and names of task forces in which project staff participated was mentioned by Post (1978).

- Statewide Diffusion of State Adopted Curriculum. The fact that the state endorsed a program and that a project utilized statewide dissemination was mentioned by Schumacher (1972).

- Cost of Dissemination. Schumacher (1972) also mentioned cost as a factor. Cost affects the quality and extent of dissemination.

- Quality of Disseminated Materials and other Dissemination Strategies. Generally, measures of quality of disseminated materials and other dissemination strategies were not discussed. However, some authors mention criteria which may be applicable. Hopkins (1976) suggests a number of criteria for reviewing educational programs and products. Some of these are adoptability, intrinsic quality, desirability, effectiveness, and efficiency. The possibility of "spinoffs" are considered an important criteria for model programs/products.

3. Continuation Measures

Continuation refers to the institutionalization of project innovations in the host site. Relatively few measures of continuation appear in the literature and those that do are much less sophisticated than the outcome measures used. This is probably due to the difficulty of quantifying the degree of continuation since there is often considerable variation on how project-generated practices and materials are utilized once the demonstration phase has terminated and the program must rely on other funding sources.

The literature indicates that authors have different conceptions of continuation. Stufflebeam (1966), Welsh and Associates (1978), and Packard and Jovick (1978) view continuation as a measure of institutionalization. On the other hand, Packard and Jovick (1978) use continuation as a measure of success while Project Baseline (1970-1974) and Gustafson (1978) use it as an impact measure.

Development Associates, Inc., (1975b) asked school administrators what their plans were for continuing the project after federal funding had terminated. Project Baseline measured continuation in terms of whether state and local funding was ever given, was reduced, remained the same, or was increased following termination of federal funding. The section of the questionnaire used to measure continuation in the Hull and Bina (1977) study is given in the abstract.

4. Adoption/Adaption Measures

While continuation refers to the longevity of the innovative project in the host site, adoption/adaption concerns the spread of the innovation to other sites, either in part or in whole. Adoption/adaption is discussed somewhat more extensively in the literature than continuation, but some of the issues are similar.

Two of the major problems in measuring the extent of adoption/adaption are: (1) the cost and difficulty of identifying and collecting data from adopting sites, and (2) the difficulty in quantifying the extent to which practices and materials from the innovative project are being used in their original form.

If the innovative project keeps a list of potential adopting organizations, then these organizations could be contacted regarding possible adoption of project generated innovations. However, some innovative projects do not keep written records of potential adopters who request information, and many adopters are unknown to the host project because information about the innovation was obtained at a conference or through a dissemination network.

More often than not, products from innovative projects are adapted or partially adopted, rather than adopted in total in other sites. This makes it difficult to assess program effects in adopting/adapting sites as they relate to program effects obtained at the host site, or to compare program effects among adapting sites.

Adoption/adaption measures have been used in both formative and summative evaluations and have focused on federal/national schools and classrooms. In a general sense, adoption has been used as a quantitative measure of program success (e.g., number of adoptions/adaptions) while summative evaluations have focused on degree of implementation as associated with program processes (e.g., extent of installation and goal attainment).

The presence, degree, and policy endorsement of an adoption have generally been interpreted as impact criteria of an innovation, particularly of a demonstration program either at the state, local school district, or individual school (Jacobson, et al., 1978; Hull and Bina, 1977; National Academy of Sciences, 1976; Project Baseline, 1970-1974; Schumacher, 1972; Welsh and Associates, 1978). Measures of adoption/adaption as impact have focused on number and/or proportion of materials requested, used (in part or whole), or evaluated by potential adopters (Jacobson, et al., 1978; Hull and Bina, 1977; Project Baseline, 1970-1974; Schumacher, 1972; Welsh and Associates, 1978; Gustafson, 1978).

Adoption as project impact has generally been evaluated by personal interviews with a sample of administrators using rating scales. House (1974) suggests innovation adoption cannot really be measured unless one considers its " realization" through formative evaluations of the teachers and administrators who have adopted.

Stufflebeam (1966) presents certain criteria which can be used in summative evaluations of program adoption particularly at the local level. These include evaluation of: (1) quantity of training, continuity of personnel, and trained personnel's knowledge, understanding, and skills; (2) adoptability and feasibility during the trial phase (first phase); and (3) effectiveness, efficiency, and policymaker support during the installations.

Adoption has been measured in a formative sense by determining initial interest to innovate; operationally, this can include interviewing or surveying supervisors, the public and teachers, to determine support (Gross, et al., 1971; House, 1974), or determining the amount of requested materials and reviewing critiques of the materials (Jacobson et al., 1978). Degree of implementation has generally been determined by evaluation of teacher behavior and attitudes (House, 1974; Loucks and Hall, 1977; Mahan, 1975; Stufflebeam, 1966).

Loucks and Hall (1977) and Mahan (1975) present measures of implementation which can be easily used longitudinally throughout the adoptive implementation period by school staff and administrators. Loucks and Hall (1977) use a seven stage "concerns" scale which the teacher may use to evaluate training received, skills, and knowledge about the innovation while a seven stage behavioral scale list may be used to generate behavioral criteria. Mahan (1975) presents a feasible strategy which can be used for teacher-student self evaluations in implemention of an adopted innovation. Observable classroom behaviors were used as qualitative indices and these had originally been generated by a panel of participating teachers and their administrators. Other measures of adoption which suggest institutionalization of a program in an adopting school or school district are given by Schumacher, (1972); these are inclusion of the program in the school or school district budget and school staff perceptions of the innovation as part of the "regular" program or as part of "basic" education.

In addition to the number and quality of adoptions, the Stanford Research Institute used three other criteria to the accomplishments of the National Diffusion Network. They are: its ability to help local districts improve their programs; its ability to help districts meet state and federal requirements; and cost effectiveness, or return on the federal investment (Far West Laboratory report, 1978).

B. FACTORS RELATED TO PROGRAM SUCCESS

In addition to assessing the state of the art in measuring the effectiveness of educational innovations, the literature review was also concerned with investigating factors related to program success. This area of inquiry addresses the internal operations of projects as well as other factors that are related to the impact and spread of innovations.

The investigation revealed that the subject of program success has been covered extensively. The results of the literature review are discussed in this section under the headings: General Literature, Project Characteristics, Dissemination Strategies, Factors Related to Continuation, and Factors Related to Adoption/Adaption.

1. General Literature

The general literature consists mostly of theoretical and organizational discussions of innovation. For example, several authors present the processes of innovation, dissemination, and knowledge utilization within the framework of organizational structures and linkage systems. (Havelock, 1973; Rippey, 1973; and Marquiles and Raia, 1972). This literature review is, by no means, an exhaustive study of the pursuits in this area. Rather, only a few such works were reviewed to provide a background for the main focus of the study.

At a more pragmatic level, Morphet & Ryan (1967) summarize the proceedings of a conference which focused on educational planning and change in 1980. Brickell (1961) presents a statewide demonstration program plan which would allocate the responsibility for educational research and development to state and local governments and various organizations. He proposes that dissemination of proven programs be done through regional groupings of schools.

2. Project Characteristics

Several characteristics are mentioned in the literature as being important for project success. Some of the studies that have investigated this relationship are based on empirical research while others are based on observations by project participants.

Factors associated with success begin before the project is implemented. First of all, the project should present an innovative approach to a demonstrated need. Secondly, adequate time and effort should go into planning. In addition, a supportive institutional setting and a dedicated project director

and staff are important. However, the characteristics mentioned most often as being associated with project success are interrelated and include: sound management, an evaluation plan built into the project design, clearly stated objectives, clearly defined roles and procedures, and adequate support and training for teachers.

- The Project Should Be Innovative and Fulfill a Demonstrated Need. According to Hamilton, et al, (1978) and the New York State Education Department report (1975), a project must be innovative, fulfill a demonstrated need, be new in the district, and have the potential for wide acceptance in order to be successful. Along these same lines, Hamilton, et al. (1978) suggest that the entry-skill level of the participants be ascertained prior to project implementation.

- Adequate Time and Effort Should be Spent on Planning. In their studies of demonstration projects, Development Associates, Inc., (1975b) and Rivlin and Timpane (1975) found that project success is related to the amount of time and effort that goes into program planning and development. This effort was reflected in the proposals submitted by projects which were ultimately successful. The Project Baseline authors (1970-1974) found that the more successful projects allowed more lead time for implementation than those that were less successful. Gustafson (1978) lists several proposal review criteria.

- The Demonstration Project Should be in a Supportive Institutional Setting. Institutional support is considered a necessary prerequisite to project success. Goodlad (1975) describes the institutional setting that is most conducive to innovative programs while Schumacher (1972) discusses organizational fludity. The Rand study (1974-1975) suggests that the project design should be readily adaptable to the reality of the setting.

  Several authors mention the necessity for institutional support and cooperation from administrators, teachers, parents, and the local school district (Development Associates, Inc., 1975b; Rand 1974-1975; Schumacher, 1972; Giacquinta, 1973; Gross, et al., 1971; Project Baseline, 1970-1974). In addition, Development Associates (1975b) and Giacquinta (1973) think that including all individuals who might be affected by the project in the planning is a valuable aid in increasing motivation to participate.

  Gooler & Ely (1972) state that existing roles of various people, goals of the department or school, and operating procedures also impinge on the innovative project. Furthermore, Gross, et al. (1971) found that project failure was, in part, attributable to the lack of compatibility between organizational procedures and the innovation.

Schumacher (1972) points out that the ease with which project components can become part of the regular curriculum is related to success and longevity. Along these same lines, the New Educational Directions, Inc. report (1977b) recommends that selection of curriculum materials be a planned process to insure infusion into the regular curriculum structure.

- The Project Director and Staff Should be Dedicated. Dedication of the project director and staff is necessary for the success of the innovation. They need to have the ability and willingness to concentrate their efforts and resources on project objectives (Development Associates, 1975b). The Rand study (1974-1975) states that the more concentrated the resources, the more likely change is to occur. Furthermore, the project director needs to assume a strong and relevant advocate role for the project to survive (House, 1971). This requires enthusiasm and commitment (Project Baseline, 1970-1974).

- The Project Should Have a Sound Management Plan. Sound management is important to project success, particularly fiscal management. Weatherford, et al. (1978) recommend the management by objectives (MBO) system of program administration as a feasible technique. Schumacher (1972) and the Project Baseline authors (1970-1974) emphasize the importance of a planned rationale for project activities. Project success, according to Harmes (1970), depends on increasing efficiency and reducing undesirable side effects. This requires ongoing monitoring by management (Carkhuff, 1978). In addition, the New Educational Directions, Inc., report (1977b) suggests that the number and distance between sites served by a single project be kept at a manageable level.

  Sound fiscal management (Development Associates, Inc., 1975b) and adequate cost recordkeeping (General Accounting Office, 1976) improve the chances of project success. Hamilton, et al. (1978) suggest that cost data be kept so that reports can be made by: (1) per pupil and total activity costs; (2) direct and indirect costs; and (3) fixed/variable costs. These data are needed as supporting evidence that the project is cost effective for replication purposes (New York State Education Department, 1975). McKinney (1971) states that more emphasis should be given to cost analysis studies.

- An Evaluation Plan Should be Built Into Project Design. Building adequate evaluation measures into the project design is a characteristic often mentioned as contributing to project success. Stufflebeam and Foley (1971) state that different types of evaluation are necessary for project success. Input evaluation considers the capabilities of the responsible agencies and the strategies for

achieving program goals. Context evaluation defines the relevant environment, identifies unmet needs and unused opportunities as well as diagnosing problems that prevent these needs from being met. It focuses on the macro and social systems level of analysis. Process evaluation provides the basis for interpreting outcomes, and for replication and refinement of procedures. Instrumental objectives may be included in the process evaluation as intermediate objectives which lead to ultimate objectives. MacDonald (1973) gives some criteria that should be used in a process evaluation. Product and summative evaluations concentrate on project outcomes.

Stufflebeam (1966), McKinney (1977), Stufflebeam and Foley (1971), Gooler (1977), and the General Accounting Office report (1976) emphasize the need for formative and summative evaluations. The New Educational Directions, Inc's. (1977b) report recommends that an evaluation plan related to the projects' stated objectives be designed early so that baseline data can be obtained.

Formative evaluation should be used as a continuing program monitoring device for decision-making (House, 1973; and Rivlin and Timpane, 1975) so that necessary adjustments can be made in project activities to keep the project targeted on its stated goals (Gooler, 1977; McKinney, 1977; New Educational Directions, Inc., 1977b). Included in the formative evaluation should be the frequent assessment of student progress rather than relying solely on pretest/posttest evaluations (Hamilton & Mitchell, 1978). Tisdel (1976) also suggests assisting teachers in interpreting student scores from ongoing evaluation procedures and getting their input into possible program adjustments and the evaluation design.

Stufflebeam (1966), Tisdel (1976), and the Project Baseline authors (1970-1974) state that the evaluation staff and project staff should work independently but should recognize and support each other. More specifically, the role of the evaluator should be defined, particularly as it relates to administrators, teachers, students, and project staff (House, 1973).

- Project Objectives Should Be Clearly Stated.
Several authors consider clearly stated, achievable, and measurable objectives a necessity for project success (Carkhuff, 1978; McKinney, 1977; General Accounting Office, 1976; Rivlin and Timpane, 1975; Tidel, 1976). There should be process and outcome objectives so that activity effectiveness can be measured. Procedures should represent the implementation of project objectives (Hamilton, et al. 1978; New Educational Directors, Inc., 1977b) and these should be included in the summative evaluation (Schumacher, 1972). Sequential

implementation of project activities as stated process objectives is another feature of project success (Havelock, 1968; Schumacher, 1972; Development Associates, Inc., 1975b). In relation to project objectives, Hoyt (1977) discusses the generic changes identified as career education goals in several mini-conferences.

- Roles and Procedures Should Be Clearly Defined. Clearly defined roles and procedures are viewed as not only necessary for successful project implementation but also for successful replicability. Havelock (1968) states that projects need a clear division of labor with clear definitions of functions. Linkage roles need to be defined in terms of the distribution of knowledge to those who need it. Projects should be staffed with personnel who have the proper orientation and training (Project Baseline, 1970-1974) and new role requirements should be made clear (Gross, et al., 1971).

  Hamilton (1978) gives the following as some of the criteria related to project quality and effectiveness:

  1. Job descriptions and skill requirements are written for each staff position to facilitate replicability.

  2. Key components of the project are written in enough detail to facilitate replicability.

  3. Significant context details are documented to facilitate replicability.

  4. All facets of the project are amendable to wide-scale dissemination.

  5. Instructional materials are available in sufficient quantities for widespread distribution.

  6. Procedures and guidelines for the implementation and use of activity materials are specified and indicate the scope and sequence of learning tasks.

  7. Equipment required to operate the activity can be made available in sufficient quantitites to make wide-scale dessemination and implementation feasible. The cost of such equipment can reasonably be assumed to be within the reach of school districts in the United States.

  8. Activities and services required for implementation can be readily supplied to the extent necessary for wide-scale replication.

  9. Complexity of all media required is not a limiting factor.

- Adequate Support and Training Should Be Provided for Teachers
  Adequate support and training for teachers is considered necessary for maintaining teacher motivation and effectiveness. Development Associates, Inc. (1975b), Mahan (1975), General Accounting Office report (1976); Gross, et al. (1971); and Project Baseline (1970-1974) consider inservice teacher training as an important criteria for project success. Such training should not only introduce the teachers to the new curriculum but should also clarify their new roles, clarify new procedures, and clearly state the objectives of the project. Relevance of the project to students and the "teachability" of the package should be emphasized (Schumacher, 1972).

  Teachers should also be provided with professional guidance during implementation in addition to inservice training (Development Associates, Inc., 1975b; Gross, et al., 1971). Some schools districts provide additional incentives, such as increased pay, for teachers to participate in innovative projects to compensate for extra time and energy that is asked of them (Gross, et al., 1971) although these incentives in and of themselves do not assure project success without inservice training. Additionally, teacher motivation can be increased by including them in the planning prior to implementation and decision-making sessions throughout the life of the project (Rand, 1974-1975).

  Packard and Jovick (1978) discuss success criteria for team teaching and Mahan (1975) suggests self-evaluation criteria for teachers.

3. Dissemination Strategies

The literature that addresses Dissemination Strategies can be generally categorized as theoretical or pragmatic. The subject matter may also be discussed under the headings of "diffusion theory" or "diffusion tactics".

Clark & Guba (1965) visualize the innovation process as consisting of four parts: (1) research, (2) development, (3) diffusion, and (4) adoption. These phases are quasi-sequential from research to adoption. Each phase should have its own discretely stated goals and objectives with criteria appropriate to the phase. The New Educational Directions, Inc., report (1977b) also recommends that each project have stated dissemination goals which reach beyond the local community. The project should be designed so it will command a broad-based support that will facilitate dissemination, according to Guba and Clark (1974). Furthermore, the project should have a division of labor with the role and functions in dissemination clearly defined and the disseminators should be trained for the task. The project should also develop instruments to measure the success of dissemination (Havelock, 1968). Rivlin and Timpane (1975) think that large-scale dissemination should only occur after each of the

following have occurred: intensive development of each innovative model, small-scale testing, careful preparation for implementation, and special development of measurement instruments for both inputs and outcomes. They estimate that this would take ten to twelve years.

Schumacher (1972) does not believe that diffusion strategies based primarily on rationalistic, comprehensive, and systematic planing are sufficient because they fail to consider the particularistic nature of educational organizations and the competive milieu within which educational diffusion occurs. Also, it cannot be assumed that diffusion to national mass audiences will automatically lead to adoption and local purchase of a product. She suggests that the most viable approach to the diffusion of educational products is through inter-organizational exchange arrangements.

Roger lists four essential elements for the analysis of diffusion: (1) the innovation, (2) its communication from one individual to another, (3) the social system within which it is being introduced and (4) the effect over time. Scriven (1974) presents standards and a checklist which can be used to evaluate programs and products. The checklist includes evaluation of marketing (dissemination) plans.

Guba (1971), and Sieber (1968) discuss obtacles to diffusion that are inherent in the educational system. Guba (1971) postulates that the strength of diffusion interventions are not equal to the strength of the myriad obstacles to change. Therefore, a simplistic approach to dissemination, such as a newsletter, will not have an effect.

Some of the dissemination strategies found in the literature are listed below:

- Direct Personal Contact.
  (Brickell, 1971; House, 1974; Hull and Kester, 1975; Sieber, 1968; Sieber, et al., 1972; Social Service Educational Consortum, Inc., 1973). House (1974) states that the success of the diffusion effort is directly proportional to the number, frequency, depth, and duration of personal contacts. Networks of such contacts are not random. They are highly predictable and stable, strongly structured by the hierarchical nature of organizations. The influence of these forces in education is profound.

  The approach described by Sieber, et al., (1972) involves "field agents" for disseminating information to schools. They meet with prospective clients, identify their needs, refer these needs to a retrieval staff located in the state education agency who performs either computer or manual searches, and then the clients quickly receive the required information (in the form of abstracts, microfiche,

bibliographies, hardcopy, or technical assistance). Field agents also help the client interpret and adapt the information. The authors suggest that some type of dissemination extension system might be a useful strategy.

The question of whether diffusion of an innovation is a response to an expressed need or whether the developers create the market has been raised in the Social Science Educational Consortion report (1973). The authors recommend that potential users be contacted early in the development stage to maximize the effectiveness of the dissemination strategies.

The Stanford Research Institute study (1977) identifies two change agents within the National Diffusion Network who effect change: (1) the developer who operates the demonstration project, and (2) the facilitator who provides a link between the developers and potential adopters. The facilitator works within a region or state to assist in dissemination and adoption (Stanford Research Institute, 1977).

- Demonstration Project Open to Visitors.
The opening of demonstration projects to visitors is a common practice (Brickell, 1971; Cedar Associates, Inc., 1978; Guba, 1971; Giacquinta, 1973; Guba, 1968; Hull and Kester, 1975). Many projects keep a log of onsite visitors which includes names and organizations (Villoni, 1978).

  However, the authors of the New Educational Directions, Inc. (1978b) report do not think having the demonstration site available to visitors is enough. They recommend that project conduct an ongoing publicity campaign. Also, demonstration site visitors should be aggressively follow up if the program includes inservice training and consultant services after visits. If this is the case, then the sites that are provided further assistance should be limited in number and the distance between sites should be manageable. Follow up should be limited to sites where implementation seems most promising or highly probable.

- Presentation and /or Displays at Various Meetings.
Another common dissemination strategy is for project staff to make presentations at various kinds of meetings (Cardhuff Associates, Inc., 1978; Post, 1978; Brickell, 1971). In the Villoni (1978) study, a record was kept of all presentations made which included the name(s) of the presenter(s), dates, and places. The SCECAMP project used displays and a demonstration slide show at an annual conference Project personnel also made presentations at local, state, and national meetings for guidence counselors. (Abramson, 1978).

  A hoped for strategy which did not materialize in the Abramson (1978) study was for a dissemination committee to be organized and to make presentations at site, borough, and citywide conferences.

- Dissemination of Printed Matter.
The dissemination of solicited and unsolicited pamphlets, brochures, newsletters, and catalogues is an often-used strategy (Abramson, 1978; Brickell, 1971; Cardhuff Associates, Inc., 1978; Development Associates, Inc., 1975b). In the Villoni (1978) study pamphlets giving an overview or sample curricula of the project were mailed (unsolicited) and a log was kept of the organizations and individuals who were sent material. Pamphlets describing the project studied by Post (1978) were sent unsolicited to: (1) career education coordinators in all senior schools in the state; (2) regional education centers in New England, New York and New Jersey; and (3) a sample of curriculum directors and supervisors of instruction in the project state and New England. Project materials were provided to key officials and interested educators as described in the Cedar Associates, Inc. (1978) study. In addition, a number of unsolicited pamphlets were distributed nationwide. In the projects studied by Development Associates, Inc. (1975b), it was found that a unique state/local relationship can enhance the successful dissemination of project information across the state. The state Division of Vocational Education helped disseminate project materials to other school districts.

  Thirty of the most promising innovations were put into a catalogue and distributed to neighborhood schools is the study conducted by Kippitt and Fox (1973). Teachers were asked to respond to one of the following: (1) didn't understand the catalogue; (2) found nothing new in it; (3) would probably try an innovation; or (4) would like more information regarding the innovation. Sixty-three percent did not return the postcard upon which the comments were to be recorded. A second postcard was mailed to those who said they would try an innovation ; they were returned and indicated that the innovation was never tried. It was found that more face-to-face contact was required for dissemination and that the school climate needs to be more amenable to innovation.

- Dissemination through ERIC.
Dissemination through ERIC was described in the Cedar Associates, Inc., (1978) report and the study done by Clark and Guba (1965).

- Project Described in Workshop or Training Sessions.
Project descriptions or overviews were often presented before small groups in workshops or inservice training sessions (Brickell, 1971; Guba, 1968). This was done throughout the state in the study conducted by Development Associates, Inc. (1975b).

- Dissemination through Regional Labs and Demonstration Centers.
This is a diffusion strategy recommended by Clark & Guba (1965). The authors visualize regional demonstration centers as a method

for institutionalizing the diffusion process. These regional centers would utilize ERIC as part of their diffusion strategies.

Similarly, other regional and statewide centers have been used to disseminate materials. For example, a liaison was established with the Center for Career and Occupational Education in the Abramsom (1978) study and developed by Guba (1971) for the Center for Vocational and Technical Education.

- Endorsement and Support from State Educational Agencies. Acquiring endorsement and support from state educational agencies often facilitates dissemination throughout the state because it puts the state stamp of approval on the project and opens state networks for dissemination (Brickell, 1971; Development Associates, Inc., 1975b).

4. Factors Related to Continuation

Many of the success criteria discussed under the subject category "Project Characteristics" are the same as those which contribute to project continuation and institutionalization. This finding was expected since project development and acceptance within the host milieu are not only crucial to project success, but also to the project's continuance. Several authors specifically addressed factors which affect continuance (Cedar Associates, Inc., 1978; Goodlad, 1975; Hearn, 1970; Hull and Bina, 1977; Packard and Jovick, 1978; Project Baseline, 1970-1974; Rand, 1974-1975).

Besides the criteria mentioned under "Project Characteristics," Goodlad (1975) suggests that innovations should be implemented with longevity in mind. Gustafson (1978) states that a formalized effort is needed to continue innovations rather than depending on key staff people. Planned longevity may be implemented through formalized and written agreement with school principals and superintendents. Cedar Associates, Inc. (1978) reported that several projects in their study had or were going to be discontinued because the schools considered them of questionable educational value. Simlarly, Hearn (1970) found that high cost and lack of significant proof of effectiveness were related to discontinuance.

The Rand (1974-1975) study found that the decision to continue is based on weighing the following factors: (1) the project's past success; (2) the centrality or importance of the educational need served by the project; (3) the resources required for the project; and (4) the organizational-political forces inhibiting or promoting the project.

Furthermore, Rand found that vocational education projects were the least likely of all the educational demonstration projects in their study to be continued even though the school superintendents viewed them as accomplishing a high percentage of their goals. Rand concluded that these projects were able to achieve a high percentage of their goals because they were not attempting major changes but were simply adding career enrichment materials to the curriculum. Data from the superintendents indicated that add-ons are the least likely to be continued. Hypotheses that were found to be significantly related to continuance are listed in the abstract.

Hearn (1970) studied the effects of project characteristics, effects of social systems variables, and effects of superintendent characteristics on program continuation. The following relationships were found between social systems variables and continuation: (1) school districts with higher educational levels expanded and continued more projects than those with lower educational levels; (2) communities with higher family incomes had a slightly greater percentage of continuation; (3) almost half of the discontinued projects were in communities that had hired all of their last three superintendents from inside the system; and (4) the greater the number of innovations tried in the past by the school districts, the more likely to continue to innovate. The study also found that urban projects were more likely to be continued while rural projects were more likely to be discontinued. Another finding was that projects which designated a higher percent of their budgets to evaluation and dissemination were more likely to be continued than those that designated relatively small amounts for these tasks. In support of this finding, Hull and Bina (1977) suggest that continued projects collect evaluation data more frequently than those that are discontinued.

A relationship was found between adoption of an innovative project outside the host site and continuation of the project within the homesite. (Hearn, 1970; Stufflebeam 1966). Continuation is an indication of local commitment to a project that may influence potential adopters. Continuation or discontinuation may reflect project success.

5. Factors Related to Adoption/Adaption

Many documents discussed the issue of adoption/adaption in education based on theoretical, empirical or impressionistic evidence. In general the aspects discussed were: (1) definition, purpose, and stages of the adoption of innovations; and (2) contextual or situational factors which inhibit or facilitate adoption

- Varied Definitions of, Purpose for, and Phases of Adoption. There seems to be little consensus on the goal of innovation adoption which, suggests House (1971), may be detrimental to effecting educational change. Adoption can be viewed as: (a) establishing alternatives to the school system (Pincus, 1974), (b) establishing change within the system to improve it (Pincus, 1974; Sieber, 1968; Rivlin and Timpane, 1975) (c) installing an innovation in whole or in part sometimes independent of its value in promoting educational change (House, 1974; Schumacher, 1972), or (d) complementing the diffusion effort (Guba, 1968; Brickell, 1971).

  At the local setting, adoption occurs in programmatic (Guba, 1968) or psychological (Lippitt and Fox, 1973; Loucks and Hall, 1977) stages. The literature suggests that either the programmatic or psychological perspective on adoption phases can be used in developing formative measures of adoption.

- Contextual or Situational Factors Affect Adoption of Innovations. Knowledge of the characteristics of the innovation, the adopter should be considered for any innovation to be successfully adopted (Brickell, 1971; Pincus, 1974; Rothman, 1974; Schmacher, 1972; Sieber, 1968). The innovation itself should: (1) fulfill specific needs (Rothman, 1974; Shephard, 1972); (2) include goals, philosophy and methods acceptable to the adopter (Kowitz 1971; Mahan, 1975; Post, 1978; Pincus, 1974; Rivlin and Timpane, 1975; Rothman, 1974; Shuy, 1976); (3) be clear comprehensive, and physically and economically feasible (Brickell, 1971; Rothman, 1974; Schumacher, 1972; Shepard, 1972); and (4) be supported by research on student impacts (Brickell, 1971; Kowitz, 1971; Mahan, 1975; Pincus, 1974; Rivlin and Timpane 1975). Understanding of the educational context involves understanding the bureaucractic and political nature of the educational system (Marguiles and Raia, 1972; National Academy of Sciences, 1976; New York State Education Department, 1975; Pincus, 1974; Sieber, 1968) or the demographics and socioeconomic status of the potential adopting school/school district (Brickell, 1971; Rothman, 1974; Pincus, 1971; Shuy, 1976). Also of importance are the needs, motivations, practices and work situations of potential adopters such as teachers, building principals or school board members (Brickell, 1971; Kowitz, 1971; Lippitt and Fox 1973; Pincus, 1974; Rothman, 1974) or state (New York State Department of Education, 1975) and federal (Pincus, 1974) policymakers.

  Rothman's (1974) review of the literature on successful diffusion and adoption of social service innovations suggests they are associated in a positive manner with a specific type of organizational structure, certain administrative procedures and staff characteristics, and emphasis on quality products/services rather than costs and greater linkages to external influences as evidenced by interagency relationships (i.e. , with R&D organizations, practitioners, client populations). Sieber (1968) specifically

suggested a three-part strategy for inducing change in the educational system which considers its organizational structure, needed linkage system changes,and bureaucratic incentives to innovate. Many authors cite extrinsic and intrinsic incentives for adoption such as legislative/supervisory/public mandates or pressure, professional peer or research-based endorsement, and the possibility of acquiring better-trained teachers, prestige, funds or other resources (Brickell, 1971; Kowitz, 1971; Mahan, 1975; Pincus, 1974; Rothman, 1974; Schumacher, 1972; Shuy, 1976).

Program evaluation studies suggest that lack of adoption can be associated with inappropriately implemented programs (e.g., inadequate planning, insufficient teacher preparation/training, insufficient budget, unclear goals) (Gross, et al., 1971; House, 1971; Hull and Bina, 1977; Kowitz, 1971; New Educational Directions, Inc., 1977b; Rothman, 1974) and R&D Organization or federal practices (Pincus, 1974). Project Baseline (1970-1974) findings also suggest that continuous adoptation of innovations can make it hard to determine whether adoption has occurred and to what extent.

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IV. PANEL CONCLUSIONS

As stated earlier in this report, three advisory panels were used during this study to discuss and provide input into project products at various stages in their development. The conclusions of these panel meetings are summarized below:

A. FIRST PANEL MEETING - December 19-20, 1978

A preliminary draft of both interim and final acceptable evidence of project impact was provided to each of the panelists before the meeting. This was done to provide a framework for discussion during the meeting. In addition, two study assumptions were presented in order to define the study scope.

These assumptions were:

- Instructional outcome and follow-up data from the original demonstration site or from adopting schools and school districts are not to be part of final acceptable evidence (that evidence collected after termination of federal support). The collection of these data at that point in time are beyond the scope of what USOE feels is feasible. Outcome data from the original demonstration site will be collected as part of interim acceptable evidence (that evidence collected during the last phases of federal support); and

- Setting of standards for project costs and for the relationship between outcomes and costs is outside the scope of this study. Thus, criteria and standards for interim evidence relative to costs will be restricted to whether or not certain data are collected by the demonstration project and are available for examination.

During two days of discussion, the panel reached consensus on a number of points. These are presented below along with relevant points of discussion which were made with regard to each.

(1) Interim acceptable evidence should include an assessment at the original demonstration site of the attainment of project objectives concerning instructional outcomes. These instructional outcomes include student outcomes, teacher outcomes, changes in the educational system, etc.

The panel felt that the collection of instructional outcome data relative to the project's objectives at the demonstration site is important in determining if a positive change has taken place.

(2) Interim acceptable evidence should include the attainment of project objectives concerning the dissemination of information. The panel recommended that each project's proposal have a dissemination plan which would include dissemination strategies and the extent of dissemination. Then the project's success would be judged on the attainment of those objectives.

(3) The extent to which a demonstration project and its objectives relates to the states or USOE plan for vocational education demonstration should be determined during the proposal review process and should be a criterion for project funding, rather than interim acceptable evidence.

The panel felt that an important criterion for assessing the utility of a project is whether the project conforms to the goals of the state plan or USOE plan. One panel member suggested that the extent of the relationships between project objectives and the state or USOE plan should be made part of interim acceptable evidence of impact. However, others suggested that projects should not be funded unless their objectives addressed the goals of the state plan or the USOE plan. Thus the assessment of the fit between project objectives and the state or USOE goals should be made part of the proposal review criteria. After some discussion, the panel agreed with the latter viewpoint.

(4) Final acceptable evidence should include the extent of utilization of the demonstration project product in the original LEA and/or school and in adopting organizations.

The panel agreed that utilization of the project beyond the demonstration phase and demonstration site is an important aspect of project impact and should be included as part of final acceptable evidence. The following criteria were suggested: awareness of the product; attitudes towards or satisfaction with the product; and use of the product in whole or in part (adoption/adaption). In order to be able to collect this information, records must be kept by the demonstration project of LEA's, schools, and individuals to whom information was disseminated. This would be done in order to identify potential adopters/adapters. The responsibility for the collection of such data would belong to the funding agency (USOE or SEA).

(5) It is unreasonable to expect funding agencies (USOE and SEAs) to collect instructional outcome data from adopting organizations for use as part of final acceptable evidence.

The panel felt that the collection of instructional outcome data from adopting or adapting organizations is extremely important in assessing the impact of demonstration projects. The panel, however, agreed that the collection of these data would be extremely expensive. Additionally, no federal money is presently set aside to pay for such a data collection effort since it would be collected after federal funding of the demonstration project had terminated. Therefore, project or outside evaluators would have to be specifically funded to collect the data. Also, adopting or adapting sites would have to agree to collect or allow outside groups to collect the necessary data. Since they are not receiving federal money, there is no incentive for them to agree to this. The panel agreed that the collection of the data is important and must eventually be collected, but that it was beyond the scope of this study.

(6) Final acceptable evidence should include attitudes toward and satisfaction with the demonstration project product on the part of teachers and administrators at the original LEA and at adopting organizations. These data should be collected on a sample basis.

As a substitute for the collection of instructional outcome data from adopting or adapting organizations, the panel suggested that teachers, administrators, and other appropriate groups should be surveyed on a sample basis in order to collect data on attitudes toward and satisfaction with the product at adopting/adapting sites. This would be used as part of final acceptable evidence.

(7) Although the criteria to be included as interim and final acceptable evidence of impact are to be specified, national standards for each criterion against which all projects can be measured are not possible. Specific standards, however, for individual RFP's should be developed by funding agencies (USOE and SEAs). The relative weights that will be given to the variables in reviewing proposals and applications for funding should also be specified in the RFP.

The panel felt that the demonstration projects are too varied (in objectives, subject matter, scope, situations and settings, etc.) to permit the development of standards that could be applied to all projects. Also, some panelists were concerned that USOE would use standards to impose additional requirements on the states in making their grants. The panel suggested that criteria be defined in order to give the states recommendations in making their grant awards rather than specifying standards which projects would have to meet. Standards could then be developed by USOE and the SEAs for each

RFP they prepare. The RFP would also discuss the priorities and relative weights which would be used in judging proposals on each criterion and its standard. These standards included in the RFP would be determined by the needs of the states and the importance of the project to the state's priorities. Additionally, there is a need to include a provision for the relative importance of different objectives. Success should be required on some objectives, but not necessarily on all objectives, in order to label a project as effective.

B. SECOND PANEL MEETING - June 19-20, 1979

The second panel reviewed a more finalized version of interim and final acceptable evidence, the proposal review criteria, and an outline of the monograph. The panel reached the following conclusions:

(1) Primary outcomes are the most important intended outcomes and should be stated as such in the proposal. In other words, the proposal should state why certain things are being done.

(2) Essential to measuring effectiveness is the ability to attribute outcomes to the intervention.

The evaluation process should document both anticipated and unanticipated primary and secondary effects.

(3) Although the term "impact" is somewhat problematic, it serves a useful purpose since it is widely used.

Impact can be defined as any short or long-term measurable change due to an intervention. Impact goes beyond just use. It looks at short-term and long-term effects.

(4) The concept of adoptions should be used rather than adaptions so that changes in the target groups can be attributed to the intervention.

Because of the difficulty in measuring outcomes at adopting sites, it is important to define the model in terms of its essential elements and anticipated outcomes. The funding agency may also want information on adaptions, but only adoptions should be used for measurement purposes. The agency or person responsible for collecting data from adopting sites should be specified by the funding agency. Data collection and record keeping at adopting sites should be specified in the monograph.

(5) Instructional outcomes should be measured at adopting sites in order to assess whether the program has had the intended effects on target group(s) when replicated.*

(6) National minimum standards should be set for each criterion because allowing states to set their own minimum standards is paramount to no standards at all.*

(7) The funding agency should be responsible for and should fund collection of the final acceptable evidence.

(8) There must be a common understanding and cooperation at the federal, state, and local levels with roles specified for implementing and diffusing the program.

Experience has shown that in programs where federal funding was given directly to the LEA's without state involvement, the program ended when federal funding terminated.

(9) Most of the risk-taking should be done in the research and development (R&D) stage of a program. Risk should not be as great an issue during the demonstration stage.

(10) Weights should be assigned to the proposal review criteria, be specific to the demonstration, and be stated in the RFP.

The more specific the RFP, the better the quality of the proposal.

(11) The commitment of the school board is important to project success.

Further, commitment must extend beyond the local school board and involve the state educational agency, the state legislators, the state advisory committee, and the community in order to encourage the diffusion of the demonstration. Commitment includes willingness to allocate funds. The political ground-work for this commitment should be laid before applying for a grant.

(12) Providing a statistically adequate needs assessment is important.

Proposals for vocational education projects have not demonstrated the universe of needs in the same manner that the Department of Labor gets for funding manpower training programs.

* Although the first panel did not reach these concludions, the second panel thought they were important.

In order to predict whether or not a demonstration will be successful, the proposal should include an assessment of the state-of-the-art of the proposed intervention, a sound needs assessment, and outcomes that may be reasonably expected from the demonstration project's target group. These outcomes should be related to the potential job market for that target group.

There is a lot of duplication of effort in demonstration programs because an adequate needs assessment has not been conducted. Very similar demonstration projects may be funded simultaneously in different parts of the same state because their existence is not adequately communicated. In cases where a concept is already being demonstrated in a state, it is better to expand on it rather than fund another demonstration of the same concept. Planning should include an effort to avoid duplication of existing systems, programs, or projects within a state.

(13) A project must be adequately funded in order to be effectively replicated.

Funds must not only be provided for implementation but also for evaluation and dissemination.

(14) A demonstration should be transportable and not unique to a particular setting.

(15) Measurable objectives and related activities should be stressed.

(16) The proposal should demonstrate an awareness of possible changes in educational subsystems due to the intervention.

The types of changes that are expected should be identified. There is a need for the SEA and LEA to take part in these systems changes to facilitate diffusion.

(17) Even though the monograph is directed toward individual project planning, planning and setting of priorities at the state level and the relationship among research, development, and demonstration should be discussed.

(18) The monograph has to emphasize that meeting the requirements set forth in the interim and final acceptable evidence has to be considered in the planning stages of the project.

(19) The role of the planner during the implementation phase is to observe the first stages of implementation and modify the original plan if necessary.

The planners should choose the project director.

The planners should act as facilitators during the early stages of implementation to ensure that the implementation, evaluation, and dissemination plans are carried out.

There must be a close working relationship between the planner and the implementer in which the planner can convey to the implementer the intent of the proposal.

There should be agreement among implementers, evaluators, and monitors on record-keeping for evaluation purposes.

(20) The monitor should be aware of all significant aspects of the project including any constraints under which the project operates.

(21) The state education agency must take the initiative to disseminate within the state.

(22) After their development, an adequate time period for the actual dissemination of materials is one year.

(23) Funds for dissemination should be provided at the outset but state and local educational agencies should not be expected to spend their funds disseminating materials outside of their jurisdiction.

(24) During the implementation stage, people from other LEA's should be invited to visit to increase their awareness of the project.

(25) A good dissemination strategy is to provide travel money for decision-makers (e.g., board members, superintendents, and middle-management) from potential adopting agencies to visit the demonstration. Such travel money should be included in the dissemination budget.

(26) An important factor in dissemination is cost-effectiveness. If a program can be adopted without additional staff or additional funds, it has a better change of being adopted.

(27) Mechanisms for disseminating across state lines include national and regional professional meetings and conferences and information provided by the National Center for Research in Vocational Education and the regional education labs.

(28) The monograph should discuss the Joint Dissemination Review Panel (JDRP) and the National Dissemination Network (NDN).

(29) Each state should set aside funds for in-service teacher training to encourage and facilitate the adoption of demonstrations.

(30) The proposal should include the evaluation plan.

(31) The monograph should advocate third-party evaluation where appropriate.

A good evaluator is one who understands the educational system and the teaching-learning process and is not just a statistician.

A third-party evaluation protects the project director as far as credibility of results are concerned.

Implementors and evaluators should be independent of each other. Further, it is not a good idea to use peers as evaluators because they may not be totally objective.

The project director needs to be involved in the third-party evaluation to identify desired impact. Project directors should also be taught to collect and code data and keep records. This minimizes evaluation costs.

(32) The lengths of the planning and implementation phases of a demonstration project should depend on the type of intervention and the extent to which it has been researched and developed.

(33) The dissemination phase should last at least one year.

(34) Interim evidence is important for making refunding decisions at various phases of the project.

Conclusion

The panel felt that the development of a monograph which discusses improving and measuring the impact of demonstration projects is a valuable undertaking. The proposed contents of the monograph are needed by administrators and project directors and will be extremely useful to them.

C. THIRD PANEL MEETING - February 15 and 20, 1980

This panel was divided into two small groups. One group concentrated their efforts on reviewing the chapter in the monograph on improving project effectiveness. The other group reviewed and made recommendations concerning the overall formatting and presentation used in the monograph. Their conclusions are summarized below:

(1) The introduction to the monograph should explain its organization and provide a rationale for the sequencing that is used.

(2) The introduction should explain that R&D and demonstration serve two different functions.

Experimenting should be in R&D not in demonstration. The curriculum can be evaluated during R&D but in demonstration there is more interest in the effects on participants. R&D evaluation focuses on the proper development of the curriculum. Demonstration evaluates whether the curriculum is being properly implemented.

(3) Certain important statements should be highlighted throughout the monograph by putting them in bold type, in a box, or by underlining.

(4) The bibliography should be rearranged chronologically to parallel the text.

More documents on planning should be concluded in the bibliography. Also, reference Ohio State's booklet on how to manage a project, Ron McCage's paper on state planning, and Florida's dissemination handbook.

(5) The monograph should be formatted so it can be used easily.

Sections for planners, implementers, evaluators, disseminators, and monitors should be highlighted. Examples should be placed in boxes. The monograph should move from the conceptual to the operational as much as possible and examples should be used. The monograph should be packaged in an attractive manner.

(6) The State should be included in planning. The state plan is a vehicle. The LEA and the demonstration should plug into the state plan. After funding, the demonstration should work cooperatively with the state.

(7) States issue two types of RFPs. One requests proposals to implement a particular type of project. The other kind is more open and requests proposals for projects for which there is a documented need. The two require different kinds of data. The latter type requires a more extensive needs assessment while the former is based on a needs assessment that has already been conducted by the state. It is important that the RFP be addressed.

(8) Local, state, and national dissemination should be built into the RFP.

The dissemination plan should include an adoption plan. How is the project going to encourage adoptions? The project should make an effort to work with the State Department and RCU director in dissemination. They should be included in formulating the dissemination objectives. Regions and consortiums can aid in dissemination.

The demonstration should provide money for teachers to attend workshops and decision-makers to visit the demonstration, such as travel and per diem. These should be addressed in the proposal. The grantee should be very selective in who it pays to visit the project.

The RFP should suggest that the project try for JDRP approval.

(9) The term "primary objectives" should be defined up front or be changed to "outcome objectives".

In the proposal, the grantee can state that objectives will be measured by an appropriate instrument or suggest a standardized instrument that could be used.

(10) The selection of an evaluator should be jointly agreed upon by the project director and funding agency.

The evaluator and project director should decide on an evaluation design and have it approved by the funding agency.

Peer group teams can be used for the formative evaluation. This approach provides a good spin-off for dissemination. The demonstration project could be evaluated by potential adopters. It also provides good in-service training.

(11) The State needs to plan early for in-service training.

This is important for program effectiveness, but takes time. Sometimes clearance is needed for the union.

(12) One of the functions of the monitor is to be sure the evaluation is being carried out and that it is being carried out in an effective manner.

Proposal guidelines should talk of objectives. The funding agency should have decision points and criteria for making decisions on continued funding that are known to all parties. The responsibilities of the funding agency should be addressed.

(13) A section should be added on applying the criteria.

(14) The need for a good record-keeping system should be emphasized.

(15) The relationship between transitional activities and institutionalization should be clarified.

The grantee should state how the program will be institutionalized and fit into the budget after termination of the grant period. A line item can always be taken out if the project doesn't work, but it is hard to put in. A good concept is that an experimental activity is being converted into the ongoing program.

(16) Different timing options and phasing-in of local funds should be discussed.

The first year the funding agency and grantee have to do a lot of planning together. At the end of the third year, the district should own the project. The funding agency may continue to fund dissemination and evaluation after the LEA has assumed the funding responsibility for implementation.

V. CASE STUDIES SUMMARY

Eight projects were selected to validate the monograph. The validation process involved the systematic collection of relevant data from project document and interviews with key individuals at these project sites. The results of the validation process indicated that the monograph is practical and useful and that the criteria and standards specified for acceptable evidence of project success are feasible. This was probably due to the extensive literature/materials review upon which the monograph was based as well as the constructive criticism it received from two very helpful panels of experts before it was taken into the field for validation. However, some changes were made in the monograph due to findings from the case studies. A summary of these findings and their implications for the monograph is presented below.

The eight vocational education demonstration projects that were chosen for the validation process were geographically dispersed across the country. Four of the projects were federally administered and four were administered by state education agencies. Due to the U.S. Commissioner's priority, the four federally administered projects demonstrated modifications of existing career education program models which utilized the three year time frame assumed in the monograph. The thrust of the state administered projects was to develop and field test curriculum models in a variety of areas that are compatible with a particular state plan prior to statewide dissemination. The time frame for these projects ranged from one to three years. The areas covered were: (1) individualized competency-based education, (2) preferred learning styles for vocational education, (3) solar energy in the building trades, and (4) experienced-based career education for the mildly mentally disabled.

The method by which the funds are administered was an important factor in the project's success, as defined by the interim and final acceptable evidence presented in the monograph. This is discussed further throughout this section. The evaluation procedures used by the projects, particularly, had implications for the valid documentation of the interim and final acceptable evidence. For example, five of the projects had third-party evaluators. The three that did not were state administered. Although these last three projects were modifying or developing curriculum systems in much the same way as the others, they relied on a formative evaluation of the curriculum materials using data from teachers and consultants. By contrast, those projects that used third-party evaluators assessed the impact of the curriculum on the students which is an important part of the type of documentation needed for the interim and final acceptable evidence.

The management of the projects was fairly good considering that many of the persons involved in management had not had significant

management training. The different projects did different things well and, conversely, had different weak areas. These variations in strengths and weaknesses were revealed in the management plans. For example, some projects stated their objectives and the activities related to the objectives in terms that could be used to manage and evaluate the project. Others were not as well stated or organized and would have made collection of the interim and final acceptable evidence somewhat difficult.

There was not much use of management tools such as timelines, networking, and personloading charts. Some organizational charts were a combination of the administrative structure of the project and a flow chart while still others included superfluous elements. This finding and others reinforced the need for some specific management techniques which are presented in the monograph.

Dissemination activities, adoptions, and the potential for adoptions varied considerably but were affected by whether the project was state- or federally-administered more than any other single factor. The state projects were funded with the idea of disseminating and institutionalizing the programs statewide. Thus, the projects were envisioned as a step in a long range state plan. By contrast, the federal grants were made mostly to local school districts with very limited dissemination and adoption capabilities. Dissemination by the local district within the state, generally, does not receive the ardent support by the state that the state administered projects do. The federally administered projects have to rely more heavily on awareness and persuasive strategies for adoptions within and outside of the state without the clout of the state education agency behind them. This places the total burden for adoptions on project personnel, whereas a large part of this responsibility is assumed by state officials for state-administered projects.

A. EVIDENCE OF IMPACT

The criteria and standards for interim and final acceptable evidence of project success presented in the monograph were applied to the eight projects to determine whether they meet the standards or could meet the standards with appropriate documentation procedures. For projects that did not meet the standards, for one reason or another, methods by which they could meet the standards are discussed in each case study. This discussion is not meant to reflect on the integrity of the projects in any way since the criteria and standards were applied post hoc, and the projects cannot reasonably be expected to meet standards that are applied retrospectively. Rather, the criteria and standards were applied and critically assessed to determine their feasibility for application to future projects.

1. Interim Acceptable Evidence

Demonstration Impact

Three of the eight projects met the standard for the demonstration impact criterion in that the intended primary outcomes were achieved and could be attributed to the program. The two major reasons the others did not meet the standard were that they either focused on evaluating process variables rather than primary outcomes or did not use a research design that would yield reliable and valid results, such as the use of a comparison group where needed. Interviews with the evaluators and project directors of the other five projects indicated that it would have been possible to collect these data if provisions had been made during the initial planning of the projects.

Even though three of the projects used comparison groups effectively in their data collection, interviews with evaluators from all eight projects indicated that the selection of an appropriate comparison group takes time due to the administrative procedures that are required. The projects who were using comparison groups were trying to do too much too soon due to time constraints. Under these kinds of conditions, the risks to the reliability of the research design are so great that they should not be ignored.

The results of the case studies supported demonstration impact as a feasible criterion and the need for projects to identify their primary objectives. Without the clarification of the primary objectives, evaluations too often focus on process variables and exclude evaluation of the primary outcomes which are the main reason for the project's existence.

Due to the necessity for comparison groups in many evaluations and the time constraints involved in their selection, it is being suggested in the monograph that the first students taken into a program be used for a pilot test of the research design for designs that require a comparison group. Valid results should not be expected at this time. Rather, it should be a time for testing evaluation instruments and and selection procedures, among other things.

Dissemination Activities

Three projects met the standards of the dissemination activities criterion in that they met their dissemination objectives, kept appropriate records of disseminations activities, and produced dissemination materials of sufficient quality. Two of these were statewide efforts while the third was a federally administered project which had received additional funds for dissemination. A third state administered project was in the process of planning for statewide dissemination, so the criterion could not be applied.

The other projects did not have dissemination objectives and did not view dissemination as a very important function of the project. Although records were kept, in many cases they were not necessarily kept for follow-up of possible adopters. The quality and content of the dissemination materials varied. One of the most successful projects, in terms of the criterion, disseminated a total package to adopting sites which included curriculum materials, evaluation materials, and information on program costs.

The results of the case studies reinforce the necessity for projects to include dissemination objectives in their plan, to establish good recordkeeping procedures, and to adequately address the informational needs of potential adopters. The dissemination of a total package which includes evaluation instruments to adopting sites will improve the chances of collecting the final acceptable evidence.

Efforts Toward Institutionalization

All the projects were making some efforts toward institutionalization and, thus, met the standards for this criterion. The findings from the case studies suggested that the originally suggested standard of "the presence of efforts being made toward institutionalization" is too weak to be of much predictive value. What was needed was a standard that encompasses what is minimally necessary for the continuation of a program. From the field experience data, it was concluded that the standard should be changed to "efforts are being made for continued funding and staff training".

This standard was chosen because it was felt that a mechanism had to be provided to train staff in the application of the program to replace staff who leave. If this training is not provided, staff attrition will eventually lead to the disappearance of the program from the school system. Staff training can range from relatively simple procedures for small programs to more elaborate procedures in larger ones.

In any event, some funding will be required to continue a program. These funds will vary depending on the magnitude of the undertaking. Funds may be from new sources or be diverted from established sources such as from older, obsolete programs. Even for small school systems that are infusing a curriculum into the ongoing system and where training of new staff can be done locally, funds will be needed for staff time and materials.

2. Final Acceptable Evidence

Utilization

Results of the case studies indicate that "utilization", as a measure of spread, is a feasible criterion for final acceptable evidence of project success and, in part, directly answers the legislative mandate. Two of the federally-administered projects and three of the state-administered projects met the standard for this criterion since the program is being fully implemented in at least two sites. The fourth state-administered project has not yet been disseminated. Thus, it is too early to apply the criterion to that project. Two of the federally funded projects did not meet the criterion.

Although eight case studies are far too few to make any definitive statements, there are indications that it will not be as difficult for the state-administered projects to meet this criterion as it will be for the federally-administered projects. This is due to the continued support the state-administered projects receive from the state education agency, particularly in the areas of statewide dissemination and institutionalization.

Long-Term Impact

None of the projects met the standards for the criterion "long-term impact". However, one state project is in the process of conducting a five-year longitudinal study of program participants using a comparision group. As a result of interviews with evaluators and project directors at the eight projects, it was concluded that the long-term impact data could be collected if funds were provided and the responsibility was appropriately delegated. Presently, school districts sample their vocational education graduates by telephone or mail periodically for five years. Follow-up of program participants and comparisons could be done as part of this endeavor. Therefore, long-term impact appears to be a feasible criterion for final acceptable evidence.

Continuation/Adoption Impact

The standard for the continuation/adoption impact criterion also has not been met by any of the projects, but one of the state-administered projects is in the process of collecting these data. Again, the findings from the eight case studies indicate that these data could be collected if someone had the responsibility for it and funds were provided.

A good method for documenting this evidence is being demonstrated by the project that is presently collecting these data. In this project the evaluation instruments and instructions for

applying them are included in the program packages that are given to adopting sites. The state is the funding agency and takes the lead in encouraging adopting sites to collect these data. Thus, the data being collected across first generation adopting sites are comparable because the same evaluation instruments and strategies are being used. An alternative would be for the funding agency to appoint a third-party evaluator to collect the data. Although this criterion appears to be the most difficult to implement, it is an important component of final acceptable evidence because it assesses the impact of the program one generation removed from the demonstration project. It attempts to answer the question of whether the program is effectively transportable to other settings.

B. CONTRIBUTIONS TO PROJECT SUCCESS

1. Pre-Grant Period

In general, the findings from the case studies support the recommendations for the pre-grant period that are discussed in the monograph. The validation process especially reinforced the usefulness of the proposal review criteria which were designed to address the areas that are important to eventual project success. Some of the factors that were particularly mentioned as being important in pre-grant planning of a project are:

- conducting a needs assessment;
- selecting a program that meets those needs;
- selecting a program that is not only compatible with long-range plans but one that can become an integral part of those plans;
- interfacing the program with the ongoing curriculum;
- using a technically competent proposal writer;
- including key proposed staff in the proposal writing, e.g., project director, evaluator, etc.
- clearly stating project objectives and related activities;
- specifying realistic timelines;
- correlating budget with activities;
- specifying a qualified and committed project director and key staff;

- identifying good facilities and necessary resources; and
- having the support of the host institution, the community, and the local and state school administrations.

Two projects were awarded planning grants for proposal development which were very useful. The planning grants provided the funds for staff time so that needs could be adequately assessed, potential programs for meeting identified needs could be investigated, plans could be formulated, and the proposal could be written. Those who received the planning grants stated that they were able to plan a better project and write a better proposal as a result of receiving the grant.

2. Grant Period

As stated in the monograph, the first few weeks after receiving the grant are usually spent in operationalizing the proposal. Some of the problems that were encountered in this process were:

- having to make adjustments in objectives;
- having to make adjustments in staff;
- underestimating requirements for implementing the program;
- having to reformulate evaluation procedures; and
- not having enough start-up time.

Other problems that were encountered during the grant period were poor management, staff turnover, trying to cope with unrealistic timelines, and trying to implement unworkable procedures that appeared in the proposal.

Factors mentioned that were related to success were:

- having clearly defined, realistic objectives;
- managing by objectives;
- having a well-qualified, dedicated project director and staff that works well together;
- having a competent third-party evaluator;
- conducting a valid formative and summative evaluation;
- having staff and administrative support;
- having dissemination objectives and a realistic dissemination plan;

- having a well-organized proposal that provides a framework for the management and evaluation of the project;
- implementing the project incrementally;
- having sufficient start-up time;
- having teachers involved;
- being student oriented;
- maintaining a liaison with the administrative and instructional staff which leads to their continuous support;
- providing intensive and effective training to adopting sites; and
- having a curriculum package that outlines systematic procedures for implementing the program, contains all necessary materials, and is attractive.

The results from the case studies largely reinforced the recommendations made for the grant period in the monograph. However, the suggested approach to the evaluation was modified. Originally, it was suggested in the monograph that a relatively detailed evaluation plan appear in the proposal. The case studies experience indicated that in most cases this is not feasible because third-party evaluators are usually hired after the grant is awarded. As a result, it is now being recommended that the parameters of the evaluation be outlined in the proposal leaving the development of an operational evaluation plan to the evaluator after receipt of the grant.

The time constraints that are placed on the evaluation due to hiring the evaluator some weeks after the grant award coupled with the problems that are encountered in the selection of a comparison group led to the recommendation that the first students participating in the program be used for a pilot test of the evaluation design, instruments, and selection procedures.

3. Post-Grant Period

In the post-grant period five projects are being continued at about the same level as they were during the grant period; one is continuing at a somewhat reduced rate; one is continuing at a very reduced level without funds; and one has been discontinued because of lack of funds. None has collected final acceptable evidence, but one is in the process of doing so.

Without federal funding the federally-administered projects that are continuing are doing a limited amount of dissemination

and technical assistance, as staff time permits. Expenses are usually paid by requesting districts. The dissemination and institutionalization of state-administered projects more often continue with funding from state and other sources.

C. ALTERNATIVE TIMING OPTIONS

Based on the literature/materials review conducted early in this project, it appears that little attention has been given to considering alternative timing options for vocational education demonstration projects. To further pursue this issue, the opinions of the project directors and evaluators from the eight projects were elicited. However, the subjective impressions of a few people cannot be expected to yield conclusive answers because the effectiveness of alternative timing options is an empirical question. With the realization that conclusions reached as a result of these interviews have limitations, we have attempted to synthesize the responses from these individuals and some of the findings from the literature/materials review into a coherent discussion of the subject.

There was general agreement among the respondents that the length of time required to adequately implement and institutionalize an innovation was dependent on the type of project being undertaken. In addition, most agreed that a five to six year funding cycle is preferable to a three year cycle, and that it would be more effective to fund fewer projects with more money over a longer period of time. Those who received planning grants thought this practice was very valuable and should be continued.

The two things that appeared to affect timing options most were the state of development that the innovation was in at the beginning of the grant period and whether the project was state- or federally administered. Even though the innovation that is proposed to be implemented in a demonstration project is supposed to be in a relatively completed state of development, that is usually not the case. In reality, refining the innovation can take from one to three years, depending on its state of development and complexity, before it can be disseminated and spread. Projects that simply attempt to modify an innovation for their own use can usually do it effectively in one year. But those projects that take on the task of developing an almost new innovation from bits and pieces of existing models require several rounds of formative evaluation of the materials and field testing which can take two or three years. All of this must be done before a program is fully implemented, demonstrated, and disseminated.

Time also has an important influence on the effectiveness of the dissemination activities. One year does not seem to be long enough to establish quality adoptions that will last and spread. Boards of education and school districts do not make quick decisions concerning the adoption of new programs. For a project that has only one year to disseminate, not much can be accomplished

beyond raising the level of awareness of potential adopters and, perhaps, getting them to a point of making a decision concerning adopting the program. In most cases, the decision to adopt will come toward the end or after the three year life span of the demonstration project. This means that it is questionable whether new adoptions will receive the type of technical assistance that is required for a new adoption to take root. The National Diffusion Network (NDN) study indicates that assimilation of a new program into a curriculum can take two to three years.* New adoptions usually require staff training and technical assistance from the host site before they can become comfortably established. Then technical assistance may be required periodically for the first year in order to reinforce the program's use. The NDN report cites the observations of Dr. Duane Webb, Colorado State Facilitator, who states that his staff maintain a close relationship with adopting sites for at least a year to ensure quality adoptions. Establishing quality adoptions is important to the spread of an innovation because quality adoptions breed other adoptions.**

Another factor that influences project success is the time during the school year that a grantee receives notification of the grant award. Most school districts schedule students and teachers approximately in April for the following fall. Grants that are awarded after these assignments have been made necessitate considerable rescheduling. The problems created by these changes impact on the project's first year. Proposed staff may not be available and there is not time to find qualified substitutes. Also, there may not be adequate time for the selection of students.

For projects that are effected by the timing cycle of the school, notification of the grant award should ideally be received by April 1 and the grant awarded by July 1. Thus, staff and students could be assigned in the spring, and the project director could begin preliminary planning during July and August.

*NDN: a success story. Concord, New Hampshire (03301): LEA Associates, 80 South Main, p. 6.

**Ibid., p. 2.

D. CONCLUSIONS

The case studies experience generally confirmed the relevancy and feasibility of the information presented in the monograph. The validation process highlighted the importance of the following points:

- clarifying and measuring primary objectives;
- stating dissemination objectives;
- using a third-party evaluator; and
- using techniques of good management.

The experience also confirmed the usefulness of the proposal review criteria.

- to suggest that projects requiring comparison groups in their evaluation design provide enough time for the proper selection of these groups;
- to suggest that projects provide time during the first year of the grant period for pilot testing the evaluation design, instruments, and procedures used for the selection of comparison groups; and
- to change the standard for the interim criterion of efforts toward institutionalization from "presence of efforts toward institutionalization" to "efforts are being made for continued funding and staff training."

Other important findings showed:

- the value of planning grants;
- the relative inability of projects to establish quality adoptions with only one year of dissemination activities; and
- the impracticability of expecting reliable and valid target group impact data the first year of project operations.

VI. MONOGRAPH

A. SUMMARY

The purpose of the monograph* was to propose a set of criteria for measuring the impact of vocational education demonstration projects and to discuss the activities and functions of key individuals in achieving improved impact. The criteria proposed for measuring impact address the requirement in the Program Improvement Section of Title I, Part B, Subpart 2 (Programs of National Significance) of the Vocational Education Act of 1963, as amended, which states that:

> "The Commissioner shall not make a grant...unless the applicant can demonstrate a reasonable probability that such grant will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after termination of such grant."

The same requirement is called for in Title I, Part A, Section 131(a) which authorizes a state-administered research program and Section 133(a) which authorizes a state-administered curriculum development program.

Criteria, standards, and documentation which define interim and final acceptable evidence of project impact were developed. Interim acceptable evidence is that evidence which should be available during the last phases of the demonstration grant period. It has three components:

- Demonstration Impact;
- Dissemination Activities; and
- Efforts Toward Institutionalization.

Final acceptable evidence is that evidence which should be available within five years of the conclusion of the demonstration grant. It also has three components:

- Utilization;
- Long-Term Impact; and
- Continuation/Adoption Impact.

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*Fleischman, H. L. and Willette, J.L. Vocational Education Demonstration: Measuring Impact and Improving Affectiveness. Arlington, Virginia: Development Associates, Inc. March 1980.

Criteria standards and documentation required for interim and final acceptable evidence of project impact are illustrated in Exhibits 3 and 4. They are discussed in detail in the monograph.

The standards proposed in the monograph are minimum. More specific standards can be set by funding agencies. When more specific standards are set, the standards by which a project will be judged should be set forth in the project guidelines or request for proposal issued by the funding agency.

In order to discuss the activities and functions of the key individuals in the planning, implementation and evaluation of a demonstration project, the monograph assumed a three-year demonstration project grant period. This period is preceded by a pre-grant period and followed by a post-grant period for the collection of final acceptable evidence of project impact. The pre-grant period is used for initial project planning and proposal development. The following must be adequately addressed during this period in order to increase chances for project success. Each should be discussed in the project proposal.

- Evidence of need for the proposed program;
- Educational significance of the proposed program and its appropriateness for meeting the stated needs of the target population;
- Project objectives and activities to meet these objectives;
- Project staff and facilities;
- Project management plan;
- Project evaluation plan;
- Commitment of the applicant organization to the project and its long-term continuation; and
- Project demonstration and dissemination plan.

A set of specific proposal review criteria which addresses the above points and which may be used by funding agencies in making grant decisions is included in the monograph and is repeated in Appendix C of this report.

The three-year grant period is divided into three one-year phases, as follows: Planning/Start-Up Phase; Implementation Phase; and Demonstration/Dissemination Phase.

EXHIBIT 3

INTERIM ACCEPTABLE EVIDENCE

TYPES OF EVIDENCE	CRITERIA	STANDARDS	DOCUMENTATION
Demonstration Impact	Extent of short-term effects on demonstration project target group(s).	Significant intended outcomes which can be attributed to program intervention.	Outcome measures from demonstration site including adequate recordkeeping system for followup data collection.
Dissemination Activities	Quality and extent of dissemination activities.	Dissemination strategies and materials include sufficient coverage and details of program to facilitate replication. Achievement of dissemination objectives as stated in the project plan.	Specification of dissemination strategies and materials. Enumeration of dissemination activities, including adequate records of recipients of program materials.
Efforts Toward Institutionalization	Extent of attempts being made to ensure program longevity after completion of the grant period.	Efforts are being made for continued funding and staff training.	Description of efforts being made.

EXHIBIT 4

FINAL ACCEPTABLE EVIDENCE

TYPES OF EVIDENCE	CRITERIA	STANDARDS	DOCUMENTATION
Utilization	Extent of utilization or spread.	Program is being fully implemented in at least two sites.	Quantification of the number of sites where the program is being fully implemented.
Long-Term Impact	Extent of long-term effects on demonstration project target group(s).	Significant intended effects which can be attributed to program intervention.	Followup measures of program effects on demonstration target group(s).
Continuation/ Adoption Impact	Extent of short-term effects on target group(s) from continuing and adopting sites.	Significant intended outcomes which can be attributed to program intervention.	Outcome measures from continuing and adopting sites.

The key activities of the Planning/Start-Up Phase are:

- Interpretation of the project proposal so that all the key actors understand its intent, how it fits into the long-range plans of the school district, and each individual's role and responsibility;
- Refinement of the management plan, including further specification of project objectives and activities, scheduling, and staffing;
- Refinement of the evaluation plan and conduct of a pilot test of that plan;
- Refinement of the dissemination plan; and
- Development of a plan for program institutionalization.

Key activities during the Demonstration/Dissemination Phase are:

- Continuation of the dissemination of project materials;
- Opening up the project to visitors from potentially adopting school districts or schools;
- Continuation of project evaluation in order to provide documentation of interim acceptable evidence or project success; and
- Preparation for continuation of the project after conclusion of the demonstration grant.

The post-grant period immediately follows the conclusion of the demonstration grant. The primary activity of concern during this period is the collection of final acceptable evidence of project impact. Since, by definition, the demonstration grant period will have been concluded, one cannot expect the grantee to collect these data. Thus, it should be the responsibility of the agency which funded or administered the original grant to collect, analyze, and report on the required data. This work can be accomplished by the funding agency staff or through a contract with the original grantee or third-party evaluator.

The discussions in the monograph assumed a three-year demonstration grant since that particular timing model has been used by the U.S. Office of Education in past funding programs. The three-year period is sufficient to startup, implement, and disseminate information on many projects and to provide evidence of impact. However, project length should depend on the scope of the project, with small and uncomplicated projects being allowed less time.

In general, for three-year projects, the last year has been reserved for demonstration and dissemination. This includes dissemination of printed materials, conduct of workshops, presentations to visitors, and training and technical assistance to potential adopters. In many cases, this period of time is insufficient for obtaining a significant number of adoptions. Thus, consideration should be given to funding demonstration projects for an additional two years, specifically for demonstration/dissemination activities to encourage adoptions.

B. ALTERNATIVE TIMING OPTIONS

A three-year funding period for demonstration projects was assumed for discussion purposes in the monograph. This time period was selected since it has been used extensively by the U.S. Office of Education and a number of state agencies. However, other timing options for funding demonstration projects should also be considered. A project's length should be determined by its scope and/or complexity, and the funding agency should avoid a system that lacks the flexibility to accommodate these variations. In this section several questions are addressed which bear on alternative timing options for demonstration projects.

How Well Developed are the Program Materials That are to be Used?

The purpose of a demonstration is to serve as an outward expression or operational evaluation of an educational practice that has already been developed in order to encourage replication in other schools or school districts. This means that program materials, should have already been developed in a research and development phase prior to funding.

In some cases, materials may need to be modified before the program can be implemented. In other cases, program materials will be ready for use without modification. To illustrate, a state may have a long range improvement plan which includes research and development of an innovation, followed by demonstration and statewide dissemination. During the research and development phase all program materials should have been designed specifically for use in the state as part of this long range plan. As a result, the program should be able to move into the demonstration phase without revisions being made in the materials. On the other hand, a school district that is using a packaged program from a curriculum laboratory or university may require some time to modify the package to fit its particular needs before the program can be implemented.

Thus, one factor that influences timing is the amount of revision that may be required in the materials before the program can be fully implemented. Although revisions should be minimal, the time required for this task varies.

How Compatible is the Program with the Ongoing System?

One of the criteria for funding a program should be its compatibility with the established system and the system's long range plans. But, compatibility is a matter of degree. An innovation by its very nature is new to the system and will require a period of adjustment before it reaches a point where it can be demonstrated. As an example, introducing an individualized competency based approach to teaching into a school district where it has never been used will require more time before it can be opened for demonstration than a program introducing new competency based components into a school system that has been using this approach for years.

Therefore, the degree to which an innovation is compatible with the ongoing system affects the time it will take to prepare the program for demonstration and, in turn, is a factor in specifying appropriate timing.

What is the Extent of the Curriculum?

Demonstration projects vary by the extent of the curriculum being implemented. Some curricula may take six weeks to teach; others may take a semester or a year. Since a program usually needs to be implemented for one or two complete cycles before it is ready to be opened for demonstration, the time it takes to complete a cycle should affect the length of the grant period. To illustrate, a six-week program may be ready for demonstration at the end of the first year of funding whereas a year-long program may not be ready for demonstration until the third year. Thus, the time it takes to complete a cycle of the curriculum is another consideration in timing.

What Type of Evaluation will be Required to Establish the Program's Credibility at the Demonstration Site before it is Disseminated?

It is important that valid and reliable outcome data be available concerning the effectiveness of the program in its new setting before it is open for demonstration. The length of time it takes to collect these data will depend on a number of factors such as the time-span of the curriculum cycle, the selection of an evaluator, completion of the evaluation plan, availability of measurement instruments, and the selection of a comparison group (where appropriate). It will take less time to obtain outcome

data for a six-week program that has a completed evaluation plan with standardized instruments, than it will to obtain data for a program that is implementing a one-year curriculum and must select an evaluator, finalize the evaluation plan, order measurement instruments, and select a comparison group.

Due to these variations, the type of evaluation that is required to establisn the program's credibility at the demonstration site should be considered in specifying appropriate timing.

How Extensive are the Dissemination Plans?

Demonstration projects also vary in the extent of their dissemination plans. A small project in a local school district may plan to concentrate most of its dissemination activities in adjacent school districts. Other projects may have plans for statewide dissemination. As a result, the magnitude of a project's dissemination plans should be another timing consideration.

Timing Recommendations

In general, for tnree-year projects, the last year has been reserved for demonstration and dissemination. This includes disseminating materials, opening the project to visitors, conducting workshops, making presentations, and providing training and technical assistance to potential adopters. Project implementers and monitors, however, have indicated that a one-year dissemination effort is insufficient for establishing a significant number of well-rooted adoptions. At least one or two additional years are required to provide the assistance that adopters need to implement the program. Since it is unreasonable to expect that projects use local funds for dissemination, suggestions have been made to phase out external support for implementation activities as the program is infused into the ongoing system, but continue grant support for dissemination activities.

Exhibit 5 illustrates a five-year funding model. It was designed to reduce the fiscal shock to a local school district of incorporating a new program into its ongoing system and to maximize the effectiveness of dissemination activities. The model also specifies several decision points for the funding agency and time frames for the collection of interim and final acceptable evidence of project impact.

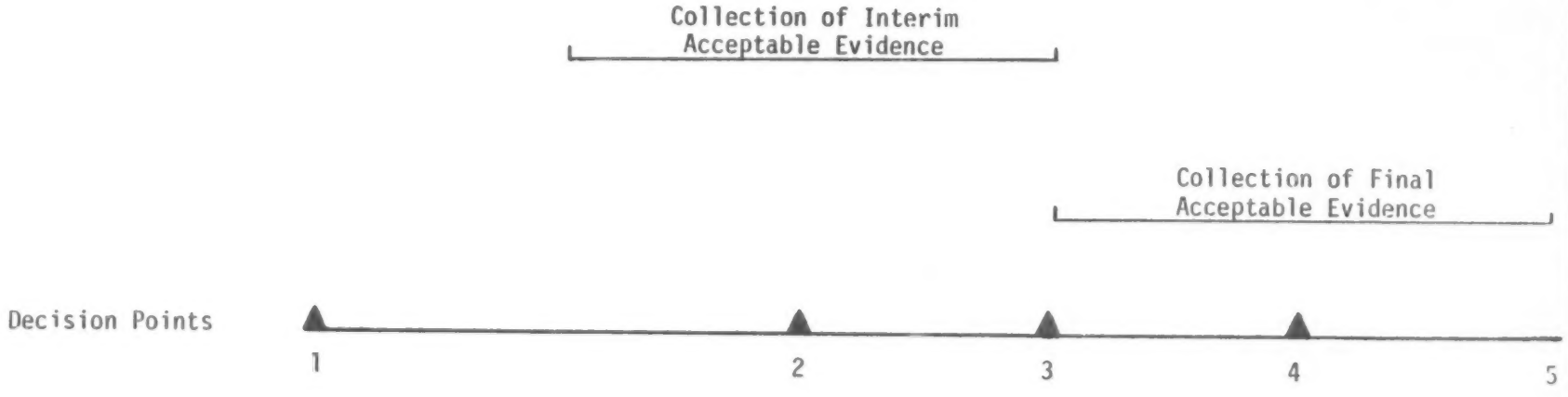
1. Program Implementation

   As the exhibit shows, the project receives 100% support from the external funding agency for program implementation during the first two years. Local funds for implementation begin to

EXHIBIT 5

FIVE-YEAR FUNDING MODEL

ACTIVITY	YEARS				
	1	2	3	4	5
Program Implementation	100% Grant Funds	100% Grant Funds	40% Local Funds 60% Grant Funds	60% Local Funds 40% Grant Funds	100% Local Funds
Dissemination	100% Grant Funds	100% Grant Funds	100% Grant Funds	100% Grant Funds	100% Grant Funds



DEVELOPMENT ASSOCIATES, INC.

be phased in at the beginning of the third year. The program receives 60% of its funds from the external funding agency in the third year and 40% in the fourth year. By the fifth year implementation activities are totally supported by local funds.

Additional grant funds are not required for program implementation in this model (as compared to the three-year model) because grant funds for implementation are split 60-40 between the third and fourth years rather than 100% the third year.

2. Dissemination

The project will receive 100% grant funding for dissemination throughout the five years. Years one and two will be devoted to finalizing dissemination plans and developing dissemination materials. Dissemination activities will begin to peak in the third year, mostly concentrating on awareness strategies. The major thrust in the fourth and fifth years would be on providing training and technical assistance to adopting sites. The funding for some of these later activities could be partially provided by the adopting sites.

3. Interim Acceptable Evidence

The collection of data for interim acceptable evidence will occur in the second and third years.

4. Final Acceptable Evidence

Data for the final acceptable evidence will be collected in the fourth and fifth years. During this time, the project will still have a vested interest in proving its effectiveness due to the continued funding for dissemination activities. The project will also be in a position to participate in data collection activities for determining final evidence of impact.

5. Decision Points

There are four points at which the funding agency can assess progress and impact, and can decide whether or not to continue funding.

Point 1: Before the project is funded. A decision is made whether to initially fund the project based on a review of the proposal.

Point 2: End of the second year. A decision is made whether to continue funding based on formative

evaluation data and documentation of interim acceptable evidence. Reliable formative data can provide information on whether the project is meeting its objectives in a timely fashion. Good outcome data from interim acceptable evidence should not be expected before the end of the second year for most projects. If the data indicate that the program is making the expected significant improvements in the target population and all of the objectives are being met, then a decision can be made to continue funding. If this is not the case, then the funding agency may decide to terminate support.

Point 3: End of the third year. Collection of interim acceptable evidence will be completed. Valid outcome data should be available. Also, there should be evidence of attempts made towards institutionalization and the quality and extent of dissemination activities should be documented. These factors can be used to make a decision concerning continuation of funding. In addition, the funding agency may decide to provide support for collection of the final acceptable evidence. If the interim acceptable evidence does not indicate that the program is effective, the funding agency may make a decision to terminate funding.

Point 4: End of the fourth year. Based on the number of actual and potential adoptions and their need for technical assistance, as well as the data collected for the final acceptable evidence of project impact, the funding agency may decide whether or not to fund a fifth year.

This model should improve the likelihood of increased project effectiveness because it provides for:

- A partnership arrangement between the funding agency and the grantee for overall project costs;
- Stronger support for dissemination; and
- Several decision points for monitoring the project's progress.

Although this model will cost somewhat more than the three-year model due to the extension of funding for dissemination activities into the fourth and fifth years, the

model should result in an increased probability of obtaining quality adoptions. Thus, it is recommended that funding agencies consider this model, perhaps funding fewer projects in order to control costs.

VII. WORKSHOPS

Three workshops were held to introduce the monograph to state and local level vocational education administrators. The workshops were held in Oakland, California; Arlington, Virginia; and Nashville, Tennessee.

Overall, 53 persons representing 38 states attended the one and one-half day workshops. Aside from an introduction and a few presentations, participants spent most of their time in small and large group problem solving sessions built around a fictitious demonstration project called SOLMOD (Solar Energy Model). At the end of each workshop, participants were asked to complete and return a workshop evaluation form. The purpose of the evaluation form was to help improve subsequent workshops. Of the 53 workshop participants, 41 returned completed forms. Some of the more interesting responses are summarized below.

Seventy-seven percent of the participants stated that they found the small and large group discussions built around the fictitious SOLMOD demonstration project to be a very useful workshop activity. They reported that these discussions gave them an opportunity to explore alternative approaches to a realistic problem with participants from other states. The discussions also provided an opportunity to share ideas concerning the issues covered in the monograph, and learn from the viewpoints and experiences of others.

Additional questions were asked in an effort to get some idea of how much the monograph will be used. One questions asked if the information presented was relevant to their needs. Eighty-three percent said it was. Other comments were:

- We were waiting to find out what the federal government meant by impact.
- We need to consider these areas in project evaluation.
- We have started on many of these activities but have much further to go.
- The monograph will be a comprehensive guide.
- We are already doing most of these things in our state.
- The information is most useful.

Seventeen percent of the persons who responded to this question stated that the information in the monograph was not relevant to their needs. Their comments included:

- This is simply too far removed from what we do in our state.
- I do not have expertise in this area.

All respondents except one said that they expect to use the monograph. The one negative response was from the individual who said that the information in the monograph was not in his/her area of expertise. When asked if they plan to train others to use the monograph or suggest they obtain a copy and use it, 83% said yes and 17% said no. The distribution of answers to this question is similar to the distribution of answers obtained from the question asking if the information presented is relevant to their needs. Some comments were:

- We plan to use it as a resource in some of our D & U efforts.
- I will share it with my colleagues.
- We will probably use it in our professional resource center.
- It will be incorporated into our procedures as part of our overall plan.
- I will share it and recommend it to sex equity, special needs, career education, and RCU staff.
- I will tell others about it.
- I will assist in utilizing some of the elements.
- I will rewrite and distribute some sections of it.

The only negative comment was:

- It would "scare away" whatever project developers or demonstrators we now have.

This comment was from the same person who said the monograph was too far removed from what is done in their state.

During the workshop discussions other issues were raised. Some participants questioned the necessity for collecting outcome data from the demonstration site and adopting sites, particularly if it had been collected during the R & D stage prior to demonstration. The reason given for collecting these data was that student outcome data often are not collected during R & D. Rather, evaluation focuses on the curriculum development process. Evaluation during demonstration assesses whether the program is being properly implemented and whether it is having the expected impact on students in a variety of settings. The collection of outcome data at adopting

sites assesses the effectiveness of the program when it is replicated.

There are variations in this process, however, which might make it unnecessary to collect student outcome data at all of these points. For example, if the curriculum is developed in a school setting using a technically credible evaluation design which shows the curriculum to be effective, it may be determined that it is unnecessary to continue to collect outcome data at demonstration and adopting sites.

It appears that there is considerable variation among the states in their level of sophistication concerning program evaluation. The responses to the questions on the evaluation form indicated that some states are already using most of the concepts in the monograph. However, a few states are so far removed from the concepts presented in the monograph that they do not perceive them as relevant. Other states are presently in the process of incorporating some of the monograph concepts into their procedures. Finally, there was some confusion among workshop participants about the purpose of a demonstration project. Some states use demonstrations but call them by another name. Other states move from R & D directly to dissemination without demonstration. Considerable time was spent in the workshops defining what a demonstration is and discussing the advantages of having demonstration projects for certain types of innovative programs. As a result of these discussions, many workshop participants thought they would consider using demonstration projects in the future.

At the close of each workshop, extra copies of the monograph were made available to participants. They were also told that additional copies are available at no charge from Development Associates until the copies printed with contract funds are used up. After that, DA will print additional copies and these will be sold on a cost recovery basis.

To a large extent, how widely the monograph is used will depend on the leadership role the Department of Education takes in program improvement. More specifically, extensive use of the monograph will depend on whether the role of demonstrations in overall program improvement is clarified, encouraged, and funded.

APPENDICES

APPENDIX A

CASE STUDY DATA COLLECTION INSTRUMENTS

1. Project Information Form
2. Project Monitor Interview Guide
3. Third Party Evaluator Interview Guide
4. Interview Guide for Adapting Organizations

PROJECT INFORMATION FORM

PROJECT _____

ADDRESS _____

_____

_____

TELEPHONE NUMBER ( ) _____

PROJECT DIRECTOR _____

DATE(S) OF DATA COLLECTION _____

INTERVIEWER _____

SECTION A. PROJECT BACKGROUND

A1. Who is was the project grantee? _____

A2. Is was the project administered directly by the USOE or through the State?

☐ USOE ☐ State

A3. When did federal funding begin? _____

A4. When does/did federal funding terminate? _____

A5. What are/were the major goals of the project?

A6. In what type of school or institutional setting is/was the project located?

A7. What is/was the population to be served?

A8. Briefly describe the project services.

A9. Describe the organization of the project staff. (Obtain an organizational chart and job descriptions for each project position.)

SECTION B. INTERIM ACCEPTABLE EVIDENCE

B1. Is the outcome impact of the program being evaluated in terms of its influence on the target population?

____ Yes, evaluation has been completed. (Answer questions in Block A.)

____ Yes, evaluation is currently taking place or is in the planning stage. (Answer questions in Block B.)

____ No, and there are no plans for evaluation. (Answer questions in Block C.)

BLOCK A

(a) What criteria were used to evaluate the outcome/impact of the program on the target population?

(b) Were any standards set to judge the success of the program in terms of its impact on the target population?

☐ Yes ☐ No

If so, what were they?

If not, why not? Could there have been? Explain.

BLOCK A continues .....

BLOCK A (con't)

c) Briefly describe the evaluation methodology or plan.

1. What data were collected and by whom?

2. Were pre-/post-test measures used?

☐ Yes ☐ No

If so, explain.

If not, why not? Could there have been? Explain.

3. Was a comparison group used?

☐ Yes ☐ No

If so, explain.

BLOCK A continues .....

BLOCK A (con't)

If not, why not? Could there have been? Explain.

(d) What were the findings?

BLOCK B

(a) What criteria are being or will be used to evaluate the outcome/impact of the program on the target population?

(b) Are any standards being set to judge the success of the program in terms of its impact on the target population?

☐ Yes ☐ No

If so, what are they?

If not, why not? Could there be? Explain.

(c) Briefly describe the evaluation methodology or plan.

1. What data are being or will be collected and by whom?

2. Are or will pre-/post-test measures be used?

☐ Yes ☐ No

If so, explain.

BLOCK B continues .....

BLOCK B (con't)

If not, why not? Could there be? If so, how?

5. Is or will a comparison group be used?

☐ Yes ☐ No

If so, explain.

If not, why not? Could there be? Explain.

BEST COPY AVAILABLE

BLOCK C

(a) Have you ever considered evaluating the program?

☐ Yes ☐ No

(b) Is funding a problem or are there other limiting factors. Explain.

(c) Is evaluation feasible? (Explore the possibilities with the respondent in terms of meeting the criteria set forth in the monograph by asking the following questions):

1. What criteria could be used to evaluate the outcome/impact of the of the program on the target population?

2. What standards of success could be set?

3. What evaluation methodology could be used? What data should be collected? Who could collect these data?

Could pre-/post-test measures and comparison groups be used?

B2. Were records kept for possible follow-up of both project participants and members of the comparison group (if applicable), e.g. names, addresses, phone numbers, test scores?

☐ Yes ☐ No

If so, what records were kept and in what format? Are the records available for follow-up? How long are the records kept?

If not, why not?

B3. For each dissemination strategy utilized, were records of individuals and organizations kept for possible follow-up regarding adaption of the program?

☐ Yes ☐ No

If so, what records were kept and in what format? Are the records available for follow-up?How long are the records kept?

If not, why not?

B4. For each strategy used indicate the number of organizations or individuals reached.

B5. Were the following types of information included in the dissemination material?

	Yes	No
a. project objectives	☐	☐
b. description of target audience	☐	☐
c. program operations and services delivered	☐	☐
d. expected project effects	☐	☐
e. staffing requirements including position descriptions and qualifications necessary for filling these positions	☐	☐
f. training requirements for staff, teachers, and others	☐	☐
g. required facilities	☐	☐
h. required materials	☐	☐
i. expected operating costs and per pupil costs	☐	☐

B6. What other information did you include in your dissemination materials that you feel is useful to organizations to facilitate replication of the program?

B7. What efforts have been made toward institutionalization? Discuss any efforts that may have been made from initial project planning through the last phase of federal funding to ensure program longevity, e.g. alternate sources of funding, infusion into the curriculum, inservice teacher training, etc.

SECTION C. FINAL ACCEPTABLE EVIDENCE

C1. Is the program being continued in the host site?

☐ Yes (If yes, answer Questions C1.1 to C1.3.)

☐ No (If no, answer Question C1.4)

C1.1 At what level is the program being continued?

☐ Low (Some components of the program are being continued.)

☐ Moderate (Approximately half of the components are being continued.)

☐ High (All of the components are being continued.)

C1.2 Which components are being continued? Have any significant changes been made in these components? Explain.

C1.3 Is the outcome/impact of the continued program being evaluated in terms of its influence on the target population?

☐ Yes, evaluation has been completed. (Answer questions in Block A.)

☐ Yes, evaluation is currently taking place or is in the planning stage. (Answer questions in Block B.)

☐ No, and there are no plans for evaluation. (Answer questions in Block C.)

BEST COPY AVAILABLE

BLOCK A

(a) What criteria were used to evaluate the outcome/impact of the program on the target population?

(b) Were any standards set to judge the success of the program in terms of its impact on the target population?

☐ Yes ☐ No

If so, what were they?

If not, why not? Could there have been? Explain.

(c) Briefly describe the evaluation methodology or plan.

1. What data were collected and by whom?

2. Were pre-/post-test measures used?

☐ Yes ☐ No

If so, explain.

BLOCK A continues .....

BLOCK A (con't)

If not, why not? Could there have been? Explain.

3. Was a comparison group used?

☐ Yes ☐ No

If so, explain.

If not, why not? Could there have been? Explain.

(d) What were the findings?

BEST COPY AVAILABLE

BLOCK B

(a) What criteria are being or will be used to evaluate the outcome/impact of the program on the target population?

(b) Are any standards being set to judge the success of the program in terms of its impact on the target population?

☐ Yes ☐ No

If so, what are they?

If not, why not? Could there be? Explain.

(c) Briefly describe the evaluation methodology or plan.

1. What data are being or will be collected and by whom?

2. Are or will pre-/post-test measures be used?

☐ Yes ☐ No

If so, explain.

BLOCK B continues .....

BLOCK B (con't)

If not, why not? Could there be? Explain.

3. Is or will a comparison group be used?

☐ Yes ☐ No

If so, explain.

If not, why not? Could there be? If so, how?

BEST COPY AVAILABLE

BLOCK C

(a) Have you ever considered evaluating the program?

☐ Yes ☐ No

(b) Is funding a problem or are there other limiting factors? Explain.

(c) Is evaluation feasible? (Explore the possibilities with the respondent in terms of meeting the criteria set forth in the monograph by asking the following questions):

1. What criteria could be used to evaluate the outcome/impact of the program on the target population?

2. What standards of success could be set?

3. What evaluation methodology could be used? What data should be collected? Who could collect these data?

Could pre-/post-test measures and comparison groups be used?

C1.4 Why wasn't the program continued in the host site? Was funding a problem?

C2. How many schools, school districts or other organizations that you know of have adapted the program?

C3. What are the names, addresses, and contact persons at these organizations?

C4. Is a follow-up of demonstration project participants being done to assess the long-term impact of the program?

- ☐ Yes, and follow-up has been completed. (Answer questions in Block A.)
- ☐ Yes, follow-up is currently taking place or is in the planning stage. (Answer questions in Block B.)
- ☐ No, and there are no plans for follow-up. (Answer questions in Block C.)

BLOCK A

(a) Who funded the follow-up data collection and analysis?

(b) What criteria were used for the follow-up to evaluate the long-term impact of the program on the target population?

(c) Were any standards set to judge the success of the program in terms of its long-term impact on the target population?

☐ Yes ☐ No

If so, what were they?

If not, why not? Could there have been? Explain.

(d) Briefly describe the follow-up methodology or plan.

1. What data were collected and by whom?

BLOCK A continues .....

BLOCK A (con't)

2. Is or will a comparison group be followed-up also?

☐ Yes ☐ No

If so, explain.

If not, why not? Could there have been? Explain.

(d) What were the findings?

BLOCK B

(a) Who is funding the follow-up data collection and analysis?

(b) What criteria are being or will be used to evaluate the long-term impact of the program on the target population?

(c) Are any standards being set to judge the success of the program in terms of its long-term impact on the target population?

☐ Yes ☐ No

If so, what are they?

If not, why not? Could there be? If so, how?

(d) Briefly describe the methodology or plan.

1. What data are being or will be collected and by whom?

BLOCK B continues.....

BLOCK B (con't)

2. Is or will a comparison group be followed-up also?

☐ Yes ☐ No

If so, explain.

If not, why not? Could there be? Explain.

BLOCK C

(a) Have you ever considered a follow-up study?

☐ Yes ☐ No

(b) Is funding a problem or are there other limiting factors? Explain.

(c) Is a follow-up study feasible? (Explore the possibilities with the evaluator in terms of meeting the criteria set forth in the monograph by asking the following questions):

1. What criteria could be used in a follow-up study to evaluate the long-term impact of the demonstration project on the target group? What standards of success could be set?

2. What data could be collected? Who could collect the data?

3. What follow-up methodology could be used? (Explore the feasibility of follow-up on both participant and comparison groups.)

SECTION D PROJECT CHARACTERISTICS

This section compiles data on the roles of project planners, implementers, monitors, evaluators, and disseminators during the planning, implementation, and demonstration/dissemination phases of the project. Planners are those persons who develop the detailed procedures for the project some of which may have been outlined in the proposal. Implementers refer to the staff who operates the project and includes the project director. Monitors are LEA, SEA, and USOE officials who ensure the project proposal objectives, budget, etc. are being followed. Evaluators refer to project and non-project personnel who assess the effectiveness of the project while disseminators are project, LEA, SEA, or other personnel who provide information about the project or train personnel from potentially adapting sites.

Planning Phase

The planning phase refers to the stage during which procedures for implementing the project are formulated. It begins at the inception of an idea for the project, includes preparation of the proposal, and continues after the granting of federal funding as more detailed strategies are developed. The following questions relate to this phase.

D1. Were any project staff members, monitors, evaluators, or disseminators involved in the development of the proposal?

☐ Yes ☐ No

If yes, who were they and how were they involved? Did their involvement contribute to project success? Explain.

D2. Did any other persons contribute to the development of the proposal?

☐ Yes ☐ No

If yes, tell who they were and how they contributed. Did their involvement contribute to project success? Explain.

D3. Was any support or encouragement given for submitting the proposal by the SEA, LEA, or host institution?

☐ Yes ☐ No

If so, did this contribute to project success? Explain.

D4. There are a number of things that we have found in the literature that are related to project success and improved impact in the planning stage. We would like to discuss these things with you and talk about it and how they contributed to the success of your project? For each of the items, we would like to know: (1) whether or not this was done in the planning of your project; (2) if it was, do you think it contributed to the success of the project and in what ways it contributed to success; (3) who were involved in the planning of each of these and what were their roles; (4) if it wasn't done, do you think it would have been helpful in achieving success and, if so, how?

a. Stating project objectives in clearly defined and measurable terms.

b. Stating the expected impact of the project on the target population as a primary objective.

c. Specifying required activities for accomplishing each objective.

d. Specifying timelines for the implementation of activities and achievement of project milestones.

e. Allowing for adequate time and effort for planning and sufficient time for start-up.

f. Identifying a project director who has management capabilities as well as subject matter expertise.

g. Developing a staffing plan which includes job descriptions, responsibilities, and required qualifications for each position.

h. Planning for adequate support and training of project staff, teachers, and other appropriate personnel.

i. Planning to include teachers and others who will be affected by the program in the development of project products and materials.

j. Developing a recordkeeping plan including designing project forms for internal and external use.

k. Developing a plan for keeping cost data so that potential adopters can estimate the cost of implementing the program.

l. Stating dissemination as a project objective.

m. Developing a dissemination plan.

n. Developing a formative evaluation plan as a management tool.

o. Planning for the formative evaluation to be conducted by a third-party.

p. Developing a summative evaluation plan.

q. Planning for the summative evaluation to be conducted by a third-party.

r. Planning for program longevity or institutionalization.

s. Planning for program transportability (i.e., flexibility for adaption in other settings.)

D5. Were there any other accomplishments in the planning stage not previously covered that contributed to the project's success?

☐ Yes ☐ No

If so, what were these accomplishments? Who were involved? What were their roles?

D6. Based on your experience, what additional things could have been accomplished during the planning phase that would have improved the project's success and ultimate impact? What would you have done differently?

D7. Was any support or encouragement given to the project during the planning phase by the USOE, SEA, LEA, host institution, or others which contributed to its success (e.g., funding, training, etc.)?

Implementation Phase

Now we would like to ask you some questions about the implementation phase. This phase covers the time during which the project is operational.

D8. We are interested in any changes that may have occurred between what was planned and what was actually implemented which particularly contributed to project effectiveness. For each of the following items, please tell us if any changes occurred. If changes were made, then tell us: (1) what the changes were; (2) why they were made; (3) who was involved; and (4) how these changes contributed to the project's success.

a. Project objectives.

b. Staffing and management.

c. Staff training.

d. Project operations or services.

e. Recordkeeping.

f. Fiscal matters.

g. Formative evaluation.

h. Summative evaluation

i. Work toward program longevity or institutionalization.

j. Dissemination plan.

D9. Was any support or encouragement given to the project during the implementation phase by the USOE, SEA, LEA, host institution, or others which contributed to its success? (e.g., funding, training, etc.)?

☐ Yes ☐ No

If so, explain.

D10. Were there any accomplishments in the implementation stage not previously covered that contributed to the project's success?

☐ Yes ☐ No

If so, what were these accomplishments? Who were involved? What were their roles?

D11. Based on your experience, what additional things could have been accomplished during the implementation phase that would have improved the project's success and ultimate impact? What would you have done differently?

Demonstration/Dissemination Phase

The demonstration/dissemination phase refers to the stage during which the project is open for observation by potential adopters and project practices and products are being disseminated for replication. The following questions are related to that stage.

D12. Were there any changes in the original dissemination plan once demonstration and dissemination began? If there were changes, what were they? Why were they made? Who was involved? Do you think these changed improved the diffusion process? If so, how?

D13. What demonstration and dissemination strategies do you think were the most effective in influencing potential adopters?

D14. What are/were the sources of funding for dissemination?

D15. Was any additional support or encouragement given to the project during the demonstration/dissemination phase by the USOE, SEA, LEA, host institution, or others which contributed to the success of the diffusion process (e.g., funding, training, etc.)? Explain.

D16. Were there any accomplishments in the demonstration/dissemination stage not previously covered that contributed to the project's success?

☐ Yes ☐ No

If so, what were these accomplishments? Who were involved? What were their roles?

D17. Based on your experience, what additional things could have been accomplished during the demonstration/implementation phase that would have improved diffusion and adoption? What would you have done differently?

Project Overview

D1s. Looking back over the life of the project, we would like to know about any significant contributions the planners, implementers, monitors, evaluators, or disseminators made to the success of the project that we may have missed.

a. First let's discuss the role of the planners and their contribution. Did the planners make any significant contributions to the project's success? If so, what were they and how did they affect the project's success?

b. What about the implementers? Did they make any significant contributions? If so, what were they and how did they affect the project's success?

c. Did the monitors make any significant contributions? If so, what were they and how did they affect the project's success?

d. Did the evaluators do anything that contributed significantly? If so, what were these contributions and how did they affect the project's success?

e. Finally, did the disseminators make any significant contributions? If so, what were these and how did they affect the project's success?

D19. As you know, projects can be funded for various lengths of time, e.g. one year, three years, five years. Regarding your project, what do you think would be the ideal funding time for each of the three phase -- planning, implementation, and demonstration/dissemination -- that would optimize the project's impact and why?

D20. Do you have any opinions regarding alternative funding times for the three phases for other types of vocational education demonstration projects that would improve their impact? If so, tell what they are and why you think they would improve the projects' impact.

PROJECT MONITOR INTERVIEW GUIDE

NAME OF DEMONSTRATION PROJECT: _____

NAME OF RESPONDENTS: _____ DATE: _____

TITLE: _____ OFFICE PHONE: _____
(area code)

NAME OF ORGANIZATION: _____

ADDRESS: _____

We are interested in three phases of demonstration projects -- the planning phase, the implementation phase, and the demonstration/dissemination phase. The planning phase refers to the stage during which procedures for implementing the project are formulated. It begins at the inception of an idea for the project, includes preparation of the proposal, and continues after the granting of federal funding as more detailed strategies are developed. The implementation phase covers the time during which the project is operational while the demonstration/dissemination phase refers to the stage during which the project is open for observation by potential adapters and project practices and products are being disseminated for replication. These phases refer to activities rather than time periods. Although they run consecutively, they do overlap each other. Some of questions below refer to these project phases.

1. Did you or your organization have a role in the planning of the project, including the development of the proposal?

Yes ☐ No ☐

If so, what was it?

2. Can you think of any outstanding things that took place during the planning phase of the project that contributed to its success?

Yes ☐ No ☐

If so, what were they? How did they contribute to the project's success? Who was involved?

3. Was this project an outgrowth of another ongoing project in the same LEA or SEA?

Yes ☐ No ☐

If so, explain.

4. Were there any features about the implementation phase of the project that you think particularly contributed to its success?

Yes ☐ No ☐

If so, what were they? How did they contribute to the success of the project? Who was involved?

5. Were there any outstanding features about the demonstration/dissemination phase that improved the chances of the program being adopted at other sites?

Yes ☐ No ☐

If so, what were they? How did they contribute to the success of the project? Who was involved?

6. Were any actions before or during the federal grant period taken by you, the project staff, or others that increased the chances of the program being continued and/or institutionalized?

Yes	No
☐	☐

If so, what were they? How did they contribute to the success of the project? Who was involved?

7. In the monograph, we will be discussing the roles that the planners, implementers, evaluators, monitors, and disseminators play in the success of the project. Planners are those persons who develop the detailed procedures for the project some of which may have been outlined in the proposal. Implementers refer to the staff who operates the project and includes the project director. Monitors are LEA, SEA, and USOE officials who oversee the project. Evaluators refer to project and non-project personnel who assess the effectiveness of the project while disseminators are project, LEA, SEA, or other personnel who provide information about the project or train personnel from potentially adopting sites.

Looking back over the grant period of _____ project,
(name of demonstration)
were there any significant contributions made to the success of the project by the planners, implementers, evaluators, disseminators, or yourself as monitor that contributed to the success of the project that we may have missed?

Yes	No
☐	☐

If so, what were they? How did they contribute to the success of the project? Who was involved?

8. Based on your experience, are there any additional things that could have been accomplished during the life of the project that would have improved its impact?

Yes	No
☐	☐

If so, what are they? How could they have contributed to the success of the project?

9. Are there any things that you think should have been done differently that would have improved the impact of the project?

Yes ☐ No ☐

If so, what are they? How do you think they would have improved the project's impact?

10. As you know, projects can be funded for various lengths of time, e.g. one year, three years, five years.

Regarding the _____ project, what do you think
(name or demonstration)
would be the ideal funding time for each of the three phases -- planning, implementation, demonstration/ dissemination -- that would optimize the project's impact and why?

11. Do you have any opinions regarding alterantive funding times for the three phases for other types of vocational education demonstration projects that would improve their impact?

Yes ☐ No ☐

If so, what are they and why you think they would improve the project's impact?

THIRD PARTY EVALUATOR INTERVIEW GUIDE

NAME OF DEMONSTRATION PROJECT: _____

NAME OF RESPONDENTS: _____ DATE: _____

TITLE: _____ OFFICE PHONE: _____ (area code)

NAME OF ORGANIZATION: _____

ADDRESS: _____

1. Did the third-party evaluation include:

A formative evaluation	A summative evaluation	Both a formative and summative evaluation
☐	☐	☐

2. Were there any limitations placed on the third-party evaluation due to constraints imposed by the project, the LEA, the SEA, or others, e.g. not being brought on board early enough to collect the necessary baseline data or select comparison groups; not enough time to design and implement the evaluation plan; lack of access to necessary data sources; etc.

Yes	No
☐	☐

If so, explain.

3. If you had unlimited resources, would you have conducted the evaluation any differently than you did?

Yes	No
☐	☐

If so, explain.

4. We would like your opinion on the feasibility of some of the impact criteria selected for inclusion in the monograph as measures of effectiveness for this project. After I read and explain each criterion, please tell me if it has been used to evaluate this project. If it has not, could it be and how?

   A. Demonstration Impact refers to the immediate impact of the project on the target group(s). Documentation for this criterion are primary outcome measures from the demonstration site(s). Standards for judging the project's success are based on significant positive primary outcomes which can be attributed to project intervention and may require the use of such things as pretest-posttest and comparison groups.

   B. Long-term Impact refers to the long-term impact of the program on project participants. Documentation requires follow up of project participants. Standards are based on significant positive effects which can be attributed to project intervention and may require follow-up of a comparison group.

   C. Continuation/Adoption Impact is defined as the extent of impact on the target group(s) from continuing and adopting sites. Documentation for this criterion are primary outcome measures from continuing and adopting sites. Again, standards are based on positive primary outcomes which can be attributed to project intervention and may require pretest-posttest measures and comparison groups.

5. Are there any particular contributions the third-party evaluation and/or the persons involved in it made to the success of the project?

Yes ☐ No ☐

If so, explain.

6. From your experience in evaluating the program, could you list some of the characteristics of the project that particularly led to its success?

7. Are there any additional things that could have been accomplished or could have been done differently that would have improved the project's impact?

Yes ☐ No ☐

If so, explain.

8. As you know, projects can be funded for various lengths of time, e.g. one year, three years, five years.

Regarding the _____ project, what do
(name of demonstration)
you think would be the ideal funding time for optimizing the project's impact and why?

9. Do you have any opinions regarding alternative funding times for other types of vocational education demonstration projects that would improve their impact?

Yes ☐ No ☐

If so, tell what they are and why you think they would improve the project's impact.

INTERVIEW GUIDE FOR ADAPTING ORGANIZATIONS

IDENTIFICATION DATA

DATE: _____

NAME OF RESPONDENT: _____

TITLE: _____ Office Tel: (___) _____
Area Code

NAME OF ORGANIZATION: _____

ADDRESS: _____

_____

OPENING

My name is _____ and I'm from Development Associates, Inc., a research firm located in Arlington, Virginia. We have a contract with the United States Office of Education to develop a monograph which addresses the measurement and improvement of the impact of vocational education demonstration projects.

We understand from (name of person making referral) of (organization to which person making referral belongs) that you may be using some of the components of the (name of program that respondent is most likely to recognize) program in your school (or other setting). We would like to ask you some questions about your program to assist us in validating the monograph. As you may know, the Educational Amendments of 1976 (Public Law 94-482) requires that demonstration grants shall not be made "unless the applicant can demonstrate a reasonable probability that such grant will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other teaching situations within five years after the termination data of such grant." Our study has been funded by USOE in response to this mandate to develop criteria and standards which will measure the impact of demonstration projects. One of the things we are particularly interested is in the spread of these demonstrations and this is why I have contacted you. Although you are not required to respond, your cooperation will enable us to make the monograph we are developing more complete.

1. How did you learn about the (name of demonstration program or materials)? How many and what kinds of contacts did you have with the demonstration project (or its products) which led to the decision to adapt it in your school (or other setting)? (e.g., newsletters, conferences, your RCU director, etc.)

2. Describe the process which led to the adaption including key decisions to actually use the program or some of its components?

3. What funding or other support was provided to you by the school, LEA, or SEA in adapting the program or materials?

4. At what level did you adapt the program?

   _____ Low (Some components of the program were adapted.)

   _____ Moderate (Approximately half of the components were adapted.)

   _____ High (All of the components were adapted.)

5. What components were adapted? Briefly describe each, identify any changes or modifications that were made and give reasons for the changes.

6. Would you have implemented more components of the program or expanded its use if you had received more support from your school, school district, state education agency, etc.? Explain.

7. Are there any components of the original program that you did not find useful for your needs?

_____ Yes _____ No _____ Not applicable

If so, what are these components and what is there about them that makes them unsuitable for your particular needs?

8. What are the objectives of the program which you adapted, as it is being used in your school or district?

9. How long has the program which you adapted been used in your school or district?

10. Describe the population the program serves.

11. How many persons have been exposed to the adapted program to date in your school or district? In how many classrooms, schools, etc., has it been implemented?

12. Has there been a summative evaluation of the program as it was adapted here in terms of its influence on its target population?

_____ Yes, the evaluation has been completed. (Answer questions in Block A.)

_____ Yes, evaluation is currently taking place or is in the planning stage. (Answer questions in Block B.)

_____ No, and there are no plans for evaluation. (Answer questions in Block C.)

BLOCK A

(a) Who funded the evaluation?

(b) What criteria were used to evaluate the success of the project? What standards of success were set?

(c) What data were collected? Who collected these data?

(d) Briefly describe the evaluation methodology or plan.(Probe for information on use of pre-/post-tests and comparison groups.)

(e) What were the findings? May we have a copy of the evaluation report?

BLOCK B

(a) Who is funding or will fund the evaluation?

(b) What criteria are being or will be used to evaluate the success of the program? What standards of success have been or will be set?

(c) What data are being or will be collected? Who is collecting or will collect these data?

(d) Briefly describe the evaluation methodology or plan.(Probe for information on use of pre-/post-tests and comparison groups.)

(e) May we have a copy of the evaluation report when it is completed?

BLOCK C

(a) Have you ever considered evaluating the program?

☐ Yes ☐ No

(b) Is funding a problem or are there other limiting factors? Explain.

(c) Is evaluation feasible? (Explore the possibilities with the respondent by asking the following questions:

1. What criteria could be used to evaluate the success of the program? What standards of success could be set?

2. What data could be collected? Who could collect these data?

3. What methodology could be used? (Explore feasibility of pre-/post-measures and comparison groups.)

13. What additional information or assistance could you have used from the demonstration project or other disseminators which would have helped you in implementing the program?

14. What dissemination strategies used by the demonstration program were the most effective in influencing you to adapt the program?

15. What other dissemination strategies do you think would have been effective in influencing you to adapt or to increase spread elsewhere?

16. To the best of your knowledge has this program or any components of it been adapted in other locations?

_____ Yes _____ No

If yes, where are these adaption sites? What components were adapted? Was the adaption based directly from your program or some other source? If from some other source, do you know what it is?

That's all the questions I have. Do you have any further comments? Thank you very much for your help.

APPENDIX B

WORKSHOPS

1. Letter of Invitation to Workshops
2. Workshops Informational Fliers
3. Workshop Simulation and Exercises
4. Workshops Evaluation Form

DEPARTMENT OF HEALTH EDUCATION AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

In Fiscal Year 1978, the Bureau of Occupational and Adult Education funded an 18-month contract to assist us in improving the effectiveness and impact of our demonstration activities in vocational education. As a result of this contract, Development Associates, Inc., of Arlington, Virginia, has prepared a monograph which we believe can make a substantial contribution to improving the effectivess of demonstration projects as one strategy in an overall plan for program improvement in vocational education. The monograph will help State staffs and local project directors to:

a) Assess and improve the procedures being used to select, fund, and monitor demonstration projects.

b) Assess and improve the procedures being used to implement demonstration projects in order to insure their continuation after external support phases have ended, and to improve their ability to document improvements in classrooms and other learning situations.

c) Assess and improve the procedures being used to disseminate information about successful projects, to encourage adoption of these projects, and to document any such adoptions which occur.

This spring, Development Associates will host a series of workshops to acquaint Federal, State, and local vocational education administrators with the monograph and the potential implementation of its contents. We believe the following groups would find these workshops both informative and helpful in making their own work easier and more effective:

1. State Directors of Vocational Education;

2. State RCU Directors;

BEST COPY AVAILABLE

3. State personnel assigned specifically to coordinate Exemplary, Curriculum, and Personnel Development Projects;

4. Local directors and/or potential local directors of Exemplary, Curriculum, and Personnel Development Projects;

5. Executive Directors and members of the State Advisory Councils for Vocational Education; and

6. Directors of Federally-supported Curriculum Coordination Units.

The Development Associates contract includes funds for reimbursing travel and per diem for one representative from each State and Territory. This representative is to be named by the State Director of Vocational Education. A special registration form is being provided to each State Director of Vocational Education for use in designating the official State representative. In addition, other Federal funds at your disposal may be used to support the attendance of additional personnel who you feel could profit from the workshops. This determination is left entirely to the State. Development Associates will register participants on a first-come, first-served basis up to their capacity to accommodate them.

We are able to direct information about the workshops only to State level personnel. State RCU Directors and their staffs are urged to reproduce the workshop registration materials and to make them available to the key persons, agencies, and groups at the local level who are your State's frequent partners in program improvement ventures.

Workshop details are enclosed in an information flier and registration form. Please complete the registration form and return it to the Development Associates by March 31.

If you have further questions, please contact Howard Fleischman at Development Associates, Inc., 2924 Columbia Pike, Arlington, Virginia 22204. His telephone number is (703) 979-0100.

Sincerely,

Daniel B. Dunham
Deputy Commissioner for
Occupational and Adult Education

ANNOUNCING

A WORKSHOP ON

MEASURING IMPACT & IMPROVING EFFECTIVENESS OF VOCATIONAL EDUCATION DEMONSTRATION PROJECTS

AN INTRODUCTION TO A NEW MONOGRAPH FROM THE U.S. OFFICE OF EDUCATION

PURPOSE: This workshop will provide participants with the opportunity to improve skills in planning, implementing, and evaluating demonstration project strategies being used in program improvement activities.

FOR WHOM: Vocational education professionals, including federal, state, and local education agency administrators and project directors.

APRIL 23 - 24, 1980

AIRPORT HOLIDAY INN

OAKLAND, CALIFORNIA

The workshop will be conducted by Development Associates, Inc. of Arlington, Virginia, the developers of the monograph under contract with the U.S. Office of Education.

AGENDA

- Why and how the monograph was developed;
- Criteria and standards for evaluating short-term project success;
- Criteria and standards for evaluating long-term project impact;
- Procedures for applying the criteria, and standards for judging the results;
- Strategies for improving project effectiveness; and
- Recommended criteria for reviewing project proposals.

Formal workshop sessions will run from 9:00 am to 4:00 pm on the first day and from 9:00 am to 12 noon on the second day. The workshop staff will be available during the afternoon of the second day for informal discussion.

REGISTRATION AND ACCOMMODATIONS

There is no registration fee; however, registration with Development Associates, Inc., is required to reserve your workshop materials. Complete and mail the enclosed registration form to:

Howard Fleischman
Development Associates, Inc.
2924 Columbia Pike
Arlington, Virginia 22204

Travel arrangements are the responsibility of participants. A block of rooms is being held for workshop participants at the following rates:

RATES:	$36 + tax for single $45 + tax for double
WHERE:	Airport Holiday Inn 500 Hegenberger Road Oakland, California 94621
TELEPHONE:	415/562-5311

To obtain this rate and ensure accommodations, register directly with the hotel by MARCH 22 and indicate that you are attending the Development Associates Workshop.

ANNOUNCING

A WORKSHOP ON

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FOR WHOM: Vocational education professionals, including federal, state, and local education agency administrators and project directors.

MAY 20 - 21, 1980

HILTON INN AIRPORT/OPRYLAND

NASHVILLE, TENNESSEE

The workshop will be conducted by Development Associates, Inc., of Arlington, Virginia, the developers of the monograph under contract with the U.S. Office of Education.

AGENDA

- Why and how the monograph was developed;
- Criteria and standards for evaluating short-term project success;
- Criteria and standards for evaluating long-term project impact;
- Procedures for applying the criteria, and standards for judging the results;
- Strategies for improving project effectiveness; and
- Recommended criteria for reviewing project proposals.

Formal workshop sessions will run from 9:00 am to 4:00 pm on the first day and from 9:00 am to 12 noon on the second day. The workshop staff will be available during the afternoon of the second day for informal discussion.

REGISTRATION AND ACCOMMODATIONS

There is no registration fee; however, registration with Development Associates, Inc., is required to reserve your workshop materials. Complete and mail the enclosed registration form to:

Howard Fleischman
Development Associates, Inc.
2924 Columbia Pike
Arlington, Virginia 22204

Travel arrangements are the responsibility of participants. A block of rooms is being held for workshop participants at the following rates:

RATES: $29 - single
$35 - double

WHERE: Hilton Inn - Airport/Opryland
#1 International Plaza
Nashville, Tennessee 37217

TELEPHONE: 615/361-7666

To obtain this rate and ensure accommodations, register directly with the hotel by MAY 1 and indicate that you are attending the Development Associates Workshop.

ANNOUNCING

A WORKSHOP ON

MEASURING IMPACT & IMPROVING EFFECTIVENESS OF VOCATIONAL EDUCATION DEMONSTRATION PROJECTS

AN INTRODUCTION TO A NEW MONOGRAPH FROM THE U.S. OFFICE OF EDUCATION

PURPOSE: This workshop will provide participants with the opportunity to improve skills in planning, implementing, and evaluating demonstration project strategies being used in program improvement activities.

FOR WHOM: Vocational education professionals, including federal, state, and local education agency administrators and project directors.

MAY 6 - 7, 1980

HOWARD JOHNSON'S NATIONAL AIRPORT MOTEL

ARLINGTON, VIRGINIA

The workshop will be conducted by Development Associates, Inc., of Arlington, Virginia, the developers of the monograph under contract with the U.S. Office of Education.

AGENDA

- Why and how the monograph was developed;
- Criteria and standards for evaluating short-term project success;
- Criteria and standards for evaluating long-term project impact;
- Procedures for applying the criteria, and standards for judging the results;
- Strategies for improving project effectiveness; and
- Recommended criteria for reviewing project proposals.

Formal workshop sessions will run from 9:00 am to 4:00 pm on the first day and from 9:00 am to 12 noon on the second day. The workshop staff will be available during the afternoon of the second day for informal discussion.

REGISTRATION AND ACCOMMODATIONS

There is no registration fee; however, registration with Development Associates, Inc., is required to reserve your workshop materials. Complete and mail the enclosed registration form to:

Howard Fleischman
Development Associates, Inc.
2924 Columbia Pike
Arlington, Virginia 22204

Travel arrangements are the responsibility of participants. A block of rooms is being held for workshop participants at the following rates:

RATES: $42 - single
$56 - double

WHERE: Howard Johnson's National Airport Motel
2650 Jefferson Davis Highway
Arlington, Virginia 22202

TELEPHONE: 703/684-7200

To obtain this rate and ensure accommodations, register directly with the hotel by APRIL 22 and indicate that you are attending the Development Associates Workshop.

SIMULATION

DEMONSTRATION OF THE SOLAR ENERGY CURRICULUM MODEL

(SOLMOD)

Funds for fiscal year 1982 in the State of Midland are limited and the State Legislature is requiring more accountability. As a result, the Midland State Department of Education has decided to fund fewer new innovative programs and concentrate available resources on the establishment of quality programs. Thus, the State Department of Education is not only interested in selecting and funding programs which have a reasonable probability of resulting in improved teaching techniques or curriculum materials and which will be used in a substantial number of classrooms or other learning situations within five years after the termination of funding, but the Department is also interested in documenting that this has actually occurred.

In the past, the State has either funded new innovative programs statewide without adequate field testing or has funded individual projects for one year and has no documentation as to the status of these projects following termination of their grant periods. The new strategy is to support projects that can be implemented incrementally across the state after their effectiveness has been adequately documented. As part of this new strategy, the process for writing and issuing requests for proposals (RFPs) has been revised; new proposal review criteria have been formulated; and interim and final acceptable evidence of project effectiveness have been defined.

Utilizing the new State guidelines, the State Division of Vocational Education has decided to fund a limited number of demonstration projects for the purpose of disseminating innovative approaches to meet some of the State's most salient needs. Training in solar energy for vocational education students in building trades programs has been identified as a priority item by State planners.

State planners found that renewable energy sources are playing an increasingly important part in solving our nation's energy crisis. As part of this movement, there has been a growing use of solar energy. The result is that there is a large demand for workers in the building trades familiar with the theory and techniques of using solar energy as a home energy source.

In the State of Midland, vocational courses and programs aimed at providing entry level skills in the solar energy field have proliferated during the last few years. These courses and programs have come about as a result of both federal and state initiatives. However, at present, students in Midland who are completing these programs are not attaining adequate levels of proficiency in job entry skills. There are also many areas in the State where students

do not have access to any form of instruction in solar energy. Consequently, there is a need to make Midland's solar energy program more accessible and effective.

To meet this need, the State Division of Vocational Education, with the approval of the Midland State Board of Education, has embarked on a comprehensive plan to provide a quality solar energy curriculum for vocational education students in the State. The program was designed to take place in the following three phases:

Phase 1: Develop a solar energy curriculum model.

Phase 2: Demonstrate and disseminate the solar energy curriculum model.

Phase 3: Establish a system for providing ongoing preservice and inservice teacher training in the use of the solar energy curriculum model.

Phase 1 has just been completed. During this phase, Midland State University developed a Solar Energy Curriculum Model (SOLMOD) for use in the building trades program for vocational education students in grade 12. The model is a one-semester course consisting of a student text, training materials for teachers, a proficiency examination which assesses the students' skills, and an instruction manual for administering, scoring, and interpreting the proficiency examination.

At present, the State is preparing to implement Phase 2. During this phase, several demonstration projects will be funded to implement, evaluate, and disseminate the SOLMOD solar energy curriculum model. The State plans to fund one demonstration project in each of the four regional education areas (REA's) in the State. Each REA consists of from fifteen to twenty local education agencies (LEA's).

Concurrently with the implementation of Phase 2, work will begin on Phase 3. During this latter phase, the State Division of Vocational Education will begin collaborative arrangements with several teacher training institutions in the State to provide preservice and inservice training to vocational educators in the use of the SOLMOD model. Thus, provisions for training new teachers and continually upgrading the skills of current users of the model will be in place and ready to be implemented as soon as the demonstration phase is completed. Until this system is in place, training will be provided to adopting schools by the Midland State University staff who developed the model and by the staffs of the demonstration projects.

EXERCISE #1

INTERIM ACCEPTABLE EVIDENCE

You are a team of State planners responsible for planning the statewide dissemination of the SOLMOD model. As part of this effort, you are planning to fund a small number of demonstration projects. You are also planning for the collection of interim acceptable evidence of project success in the final phase of the grant period for each funded project, as outlined on page 12 of the monograph. Although the monograph assumes a three-year demonstration project, you may assume whatever time frame you think is appropriate given the one-semester SOLMOD curriculum. The criteria for interim acceptable evidence are listed below. Please discuss and answer the questions under each criterion and be prepared to present your conclusions. Keep your answers short and to the point.

DEMONSTRATION IMPACT

As planners, you would like to know the extent to which students enrolled in the SOLMOD project learned what you intended for them to learn. The criterion was designed to measure this.

The criterion "demonstration impact" refers to immediate student outcomes upon completion of the course (for example, test scores). It does not include job placement or follow-up measures since job placement is not a component of the SOLMOD model and follow-up measures are covered under "long-term impact," a criterion of final acceptable evidence (page 22 of the monograph).

Questions

What kind of data would you want collected from students as they complete their participation in the SOLMOD project to tell you whether they learned what you intended for them to learn?

Would you use a pretest and posttest?

Would you use a comparison group?

If you decided to use a comparison group, how would you select one?

What are some of the problems you might encounter in trying to select a comparison group?

How could some of these problems of selecting a comparison group be overcome or, at least, alleviated?

DISSEMINATION ACTIVITIES

The criterion "dissemination activities" refers to the extent of dissemination activities and the quality of dissemination materials (pages 16-17 of the monograph) which are developed in order to encourage the eventual spread of SOLMOD.

As planners, you would expect the project to have a realistic dissemination plan with measurable objectives that could be used to manage and evaluate dissemination activities. These objectives should be directed at establishing at least two quality SOLMOD programs in the REA. In addition to awareness and familiarization efforts, dissemination objectives should also provide for training and technical assistance to adopting sites since the State level inservice and preservice teacher training program will not be in place during the round of demonstration projects.

Question

List 3-6 measurable dissemination objectives for the SOLMOD program that address the issues discussed above.

EFFORTS TOWARD INSTITUTIONALIZATION

Funds are limited, so you want to fund only projects that have a reasonable probability of continuing. The criterion "efforts toward institutionalization" refers to attempts being made to ensure program longevity at the demonstration site after completion of the grant period. The standard for this criterion is that provisions are being made for continued funding and staff training. Continued funding does not necessarily mean additional funding. Funds may be diverted from various existing sources, or the program may be replacing a more obsolete curriculum. Since provisions are being made for inservice and preservice teacher training at the State level, this will not be a concern at the demonstration project level in this simulation. However, provisions will have to be made to train new teachers and periodically update the skills of the existing faculty.

Questions

What are some of the activities that should be undertaken during the grant period to ensure continuation of the program at the demonstration site after termination of external support from the grant?

When should these activities be carried out?

ADDITIONAL DATA

The criteria, standards, and documentation for interim acceptable evidence are necessary for assessing project success in the last phase of the grant period. However, because they are minimal, you may want additional data collected to enrich your depth of understanding concerning the success of the project.

Question

As State planners, what other kinds of data or information in addition to the interim acceptable evidence would you want about a SOLMOD demonstration project in its last phase of the grant period?

EXERCISE #2

FINAL ACCEPTABLE EVIDENCE

As State planners, you want to know if the SOLMOD project has resulted in improved products and practices that have been used in a substantial number of classrooms or other learning situations within five years after termination of the grant award. Final acceptable evidence is designed to provide this information. Please discuss and answer the questions under each criterion and be prepared to present your conclusions.

UTILIZATION

The question that is addressed by the criterion 'utilization' is: How extensive is the spread of the innovation? This refers to the number of sites where the program is being implemented. The minimum standard given in the monograph for this criterion is that the program should be fully implemented in at least two sites within five years after termination of the grant.

Questions

What unit of analysis would you use to count the extent of spread of the innovation, e.g. students, classrooms, sites?

How would you measure the level of implementation of the program at the various sites, i.e. whether the program is being fully adopted or only partially adapted?

When would you collect these data?

LONG-TERM IMPACT

In response to whether or not the project has resulted in improved products and practices, you would like to know if the program has a significant long-term impact on the target population. The criterion 'long-term impact' provides the documentation to answer this question. It refers to the follow-up of students from the original demonstration project. These are the same students from whom the 'demonstration impact' data were collected as they completed the program. Long-term impact measures may address whether or not the student has found a job in which he/she is using the training, the extent to which the ex-student is satisfied, etc.

Questions

When should the long-term impact data be collected?

Who should collect these data?

Describe the follow-up approach you would take, including steps to insure that effects on students can be attributed to the program.

CONTINUATION/ADOPTION IMPACT

The criterion continuation/adoption impact answers the question: Does the innovation have a significant short-term impact on the target population when it is replicated? It refers to the immediate student outcomes upon completion of the course at sites where the program is being continued or being adopted. Thus, continuation/adoption impact for final acceptable evidence is analogous to demonstration impact, a criterion of interim acceptable evidence, in that both assess the effects of the program on participants immediately upon completion of the course.

Questions

When would you plan to have the continuation/adoption impact data collected?

What data would you have collected so that any changes in student performance could be attributed to participation in the SOLMOD program? (You may wish to refer to your answer given in Exercise #1 for the criterion 'demonstration impact.')

Who would you have collect these data?

How would you fund the collection of these data?

ADDITIONAL DATA

As with the interim acceptable evidence, the criteria, standards, and documentation for final acceptable evidence are necessary for assessing project effectiveness. However, the final acceptable evidence reflect only the minimum evidence that is needed to document the number of classrooms or other learning situations in which the program is being effectively used within five years after termination of the grant. You may want additional information concerning project effectiveness.

Question

As State planners, what other kinds of data or information in addition to the final acceptable evidence would you want about a SOLMOD demonstration project within five years after termination of the grant?

EXERCISE #3

PREPARATION OF PROJECT GANTT CHART

As State planners, schedule the activities which appear on the attached "List of Tasks" on a GANTT chart the way you think they should be carried out for a SOLMOD demonstration project. You may add subtasks if you wish. Sample GANTT charts appear on pages 64 and 71 of the monograph for your inspection.

For this exercise, you may use any time frame which you think is appropriate given the one-semester SOLMOD curriculum; the need for providing documentation for interim acceptable evidence of project effectiveness; the need for establishing quality adoptions; and the need for providing documentation of final acceptable evidence of project impact within five years of the completion of the demonstration grant. Be sure to specify a start-up date for the demonstration project and schedule your activities to fit within the normal school year cycle. Use a separate GANTT chart for each year of your proposed project and for each year following the grant period in which you will collect final acceptable evidence. Be prepared to present and provide the rationale for your GANTT chart.

LIST OF TASKS FOR SOLMOD DEMONSTRATION PROJECT

MANAGEMENT

1. Refine management plan
2. Hire staff
3. Train staff
4. Select third-party evaluator
5. Select students to participate in program
6. Teach SOLMOD curriculum
7. Submit annual report to funding agency

DISSEMINATION

1. Refine dissemination plan
2. Prepare dissemination materials
3. Disseminate materials
4. Open project to visitors
5. Provide training and technical assistance to adopting sites

EVALUATION*

1. Refine evaluation plan
2. Pilot test plan for collection of student outcome data
3. Collect documentation for evidence of demonstration impact, a component of interim acceptable evidence
4. Collect documentation for evidence of dissemination activities, a component of interim acceptable evidence
5. Collect documentation for evidence of efforts toward institutionalization, a component of interim acceptable evidence
6. Collect documentation for evidence of utilization, a component of final acceptable evidence
7. Collect documentation for evidence of long-term impact, a component of final acceptable evidence
8. Collect documentation for evidence of continuation/adoption impact, a component of final acceptable evidence

*Be sure to provide for the selection of a comparison group and the pretesting and posttesting of program participants and comparison group members, where necessary.

GANTT CHART

YEAR_____

TASKS	MONTHS											
	1	2	3	4	5	6	7	8	9	10	11	12

EXERCISE #4

RFP PREPARATION

As state planners in the Division of Vocational Education, Midland Department of Education, you are responsible for outlining the contents of an RFP for SOLMOD demonstration projects. Complete the following tasks. Be prepared to present and provide the rationale for your decisions.

1. Using the GANTT chart you developed in Exercise #3, identify the decision points on the GANTT chart where you would be able to make decisions concerning whether or not to continue funding of the project. Briefly list the kind of evidence of project performance you would be assessing at each decision point. You may want to refer to pages 96-103 of the monograph.

2. Standards for interim and final acceptable evidence of project effectiveness are suggested in the monograph. It is also suggested in the monograph that some of these standards can be raised by the funding agency for specific programs. Assuming that your goal is to disseminate the SOLMOD program statewide within a specified time period, what specific standards would you propose for the following criteria?

    - dissemination activities
    - efforts toward institutionalization
    - utilization

3. You have decided to specify proposal review criteria in the RFP. Briefly review the proposal review criteria in Appendix B of the monograph. Then based on your decisions in the preceding two tasks of this exercise, decide whether you would leave each criterion as is, modify it somewhat, or state more specific requirements. List and provide the rationale for any modifications or additional requirements.

MEASURING IMPACT AND IMPROVING EFFECTIVENESS OF VOCATIONAL EDUCATION DEMONSTRATION PROJECTS

Workshop Evaluation Form

INSTRUCTIONS

Please complete each question by placing an X on the appropriate line or in the appropriate box. Please also write any comments you have which will help interpret your response. If need be, continue your comment and/or explanations on the back of the page. This evaluation is completely anonymous. The results will be used to improve the workshop design and to provide feedback to Development Associates and the U.S. Office of Education on the effectiveness of the workshop.

SITE: _____ DATE: _____

1. Please rate the overall effectiveness of the workshop.

Low — — — — — — — — — — High
1 2 3 4 5 6 7 8 9 10

Comments: _____

_____

_____

2. The goals of the workshop are listed below. Please rate the workshop on the degree to which the goals were achieved.

Goal I: To familiarize participants with the criteria, standards, and documentation of interim and final acceptable evidence of project effectiveness.

Low — — — — — — — — — — High
1 2 3 4 5 6 7 8 9 10

Comments: _____

_____

_____

_____

Goal II: To familiarize participants with the use of the monograph in improving project effectiveness.

Goal Not Achieved	— 1	— 2	— 3	— 4	— 5	— 6	— 7	— 8	— 9	— 10	Goal Completely Achieved

Comments: _____

_____

_____

_____

Goal III: To familiarize participants with the proposal review criteria specified in the monograph.

Goal Not Achieved	— 1	— 2	— 3	— 4	— 5	— 6	— 7	— 8	— 9	— 10	Goal Completely Achieved

Comments: _____

_____

_____

_____

3. Overall, did you find the information presented sound and realistic?

☐ Yes ☐ No

Comments: _____

_____

_____

_____

4. Which workshop activities were most useful to you? Why?

_____

_____

_____

_____

_____

5. Did you find the information presented relevant to your needs?

☐ Yes ☐ No

Comments: _____

_____

_____

_____

6. The workshop was designed to present an overview of the contents of the monograph. From what you know of the monograph without having had an opportunity to read it thoroughly, do you plan to use it?

☐ Yes ☐ No

Comments: _____

_____

_____

_____

7. Do you plan to train others to use the monograph or suggest to others that they obtain a copy and use it?

☐ Yes ☐ No

Comments: _____

_____

_____

_____

8. Do you have any suggestions for improving the workshop?

☐ Yes ☐ No

Comments: _____

_____

_____

_____

APPENDIX C

RECOMMENDED CRITERIA FOR REVIEWING DEMONSTRATION PROJECT PROPOSALS

The criteria which follow are recommended for use by funding agencies for reviewing demonstration project applications or proposals. The criteria are sufficiently general in nature to be applied to most projects. Additional criteria may be added by funding agencies for specific types of projects or for specific program or legislatively-mandated requirements. Appropriate weights should be assigned to the criterion categories by funding agencies for specific types of projects. It was felt that proposing one set of weights for judging proposals for all possible types of demonstration projects would be inappropriate. For example, staffing and facilities may be more important for one type of project than for another.

The criteria and weights to be used in judging proposals should be specified at the time the RFP is prepared. They should appear in the RFP so that each applicant organization will be aware of exactly how its proposal will be judged.

PROPOSAL REVIEW CRITERIA

CRITERION CATEGORY I - EVIDENCE OF NEED

CRITERION I-A The proposal focuses on the announced priority.

The proposal should be relevant to the specified priorities and fulfill the requirements set forth in the RFP.

CRITERION I-B Need is clearly defined with respect to the population to be served.

The needs of the target population should be clearly defined. The discussion should include a description of the characteristics of the population to be served, who will be included, and who will not be included.

CRITERION I-C Sufficient evidence of need within the demonstration project target area is provided.

Whenever possible the extent of need within the demonstration project target area should be supported by reliable evidence which appropriately addresses the population to be served. Objective data are preferable to the judgments of selected experts.

CRITERION I-D The proposal addresses the seriousness of need in the target area and previous attempts the applicant organization and others have made to solve the problem on their own.

The social significance of the need, previous attempts to provide solutions, the absence of substitute solutions, the urgency of the problem, and the newness of the proposed intervention in the target area and the state should be demonstrated. Need may be considered as the difference between what is being provided and what should be provided. Evidence of need for the project may involve economic, social and/or environmental impact considerations. The applicant should state whether or not this, or a similar proposal, has been submitted to the agency or another agency or organization; and whether or not this proposal is an extension of, or an addition to, a previous or existing project. If it is, details should be provided.

CRITERION I-E Sufficient evidence of need for populations beyond the demonstration project target area is provided.

Whenever possible, reliable evidence should be provided which indicates the extent of populations beyond the demonstration project target area that could benefit from such an intervention either in the project's state or across the country.

CRITERION CATEGORY II - EDUCATIONAL SIGNIFICANCE

CRITERION II-A Sufficient evidence is provided that the proposed intervention has a reasonable probability of leading to the expected impact.

The proposed intervention and its expected impact should be described. The intervention should be directly related to the needs of the target population(s). Evidence of probable impact should be provided by such things as references to results from similar interventions.

CRITERION II-B Sufficient evidence is provided that the applicant is knowledgeable of the "present state of the art" for the proposed intervention.

Evidence should be provided that the project is based on appropriate and relevant literature. The applicant should demonstrate a working knowledge of what has been done, what is being done, and what is projected in the field. The review may include both published and unpublished works. The pertinent literature should be summarized. A rationale for the proposal and a description of the uniqueness of the intervention should be provided. Similar studies which have been undertaken in the recent past should be referenced. The applicant should also provide evidence that a similar demonstration project is not presently being funded in the state or has not been in the recent past.

CRITERION II-C Sufficient evidence is provided that the proposed intervention has educational significance beyond the demonstration site and can be implemented in other locations with reasonable expectations of comparable impact.

Evidence should be provided that the proposed intervention clearly defines and focuses on a problem of major importance including its expected contribution or potential impact. In addition, the transportability and potential project practices and products should be addressed with respect to their possible application in other programs or geographical areas.

CRITERION CATEGORY III - PROJECT OBJECTIVES AND ACTIVITIES

CRIERION III-A The objectives address the stated needs.

The project objectives should relate to the population needs, should focus on the priority area, and should be consistent with the relevant literature.

CRITERION III-B The objectives are attainable.

The objectives should be realistic and capable of being achieved as outlined in the proposal.

CRITERION III-C The objectives are defined in measurable terms.

The objectives should be independent of one another and clearly stated in measurable terms. Where applicable, they should state who will exhibit the behavior, what the behavior will be (in observable terms), and what intervention will bring it about. The reader shold be told how a person's behavior is expected to be shaped if exposed to the intervention. Reasonable expectations for the specified population should be addressed, especially regarding high risk populations such as the handicapped or disadvantaged.

CRITERION III-D The objectives are arranged in approximate order of importance with outcome objectives as primary. Outcome objectives should address the expected impact on the population to be served.

The objectives should be arranged, as nearly as possible, in a hierarchy of importance. Outcome objectives, which address the expected impact on the target population, should be the primary or highest level objectives in the hierarchy.

CRITERION III-E Activities are related to objectives and can be expected to result in attainment of the objectives.

A specific description should be provided of the activities proposed for each major step in the project. These activities should be specifically identified with the objective that they are designed to accomplish and should be expected to lead to the attainment of the objective.

CRITERION III-F Criteria for selecting participants are clearly described.

The procedures and criteria for selecting project participants and comparison groups (for program evaluation) should be stated. In addition, provisions for assuring non-discrimination should be discussed.

CRITERION III-G Plans are outlined for including potential users in the development of project practices and products.

Provisions should be made to include input from potential users during all phases of the project to ensure the usefulness and quality of the practices and products generated and to increase motivation to participate.

CRITERION III-H Procedures are outlined for increasing probability of program longevity or institutionalization.

Plans should include steps to be taken to ensure financial support of the program upon conclusion of the grant period, and methods for infusing it into the ongoing educational system.

CRITERION CATEGORY IV - STAFFING AND FACILITIES

CRITERION IV-A Proposed personnel, consultants, subcontractors, and advisory group members have the necessary qualifications for the project.

The proposed staff should possess the qualifications, competencies, and experience appropriate to their assigned tasks. Proposed consultants, subcontractors, or advisory committee members should be specified. How they were selected and why they are qualified and appropriate to the goals of the project should be included.

CRITERION IV-B The project director has management capabilities as well as subject matter expertise.

The project director should have the necessary qualifications for managing the day-to-day operations of the project so that the objectives will be met within the time frame and budget proposed. In addition, he/she should demonstrate an expertise in the proposed intervention.

CRITERION IV-C Amount of time to be committed to the project by each individual is sufficient to carry out the proposed activities.

The proposal should specify the percentage of time to be assigned to the project by each staff member and clearly show that it is sufficient to ensure completion of all project tasks. If an advisory committee, volunteers, or other individuals will be participating in the project, assurances should be provided that these persons have both the time and the commitment to fulfill their responsibilities as outlined in the proposal.

CRITERION IV-D Provisions are made for adequate support and training of project personnel, teachers, and others, where applicable.

The support and training that will be provided for project personnel, teachers, and others who participate in the project should be specified in the proposal. This includes such things as inservice training, professional guidance, and additional compensation or time off for participating.

CRITERION IV-E Location(s), facilities, equipment, and materials are appropriate for the project.

Reasonable evidence should be provided that location(s), facilities, equipment and materials for the project are both appropriate and adequate. The location of project activities should be identified and reasons given for its selection. Any cooperative arrangements regarding facilities should be specified. A description and justification should be provided for equipment and materials needed for the project, especially if they are required for special needs. Provisions should be made for access to facilities by the handicapped.

CRITERION CATEGORY V - MANAGEMENT PLAN

CRITERION V-A The proposal specifies a plan for the management of the project which includes relationships among the involved organizations and individuals, and responsibilities of each.

The plan should address the manner in which the project will be organized and managed to accomplish the objectives set forth in the proposal. Methods for controlling operations and procedures for review and quality control of work should be stated. The plan should also include: (1) the organizational structure of the project team; (2) written position descriptions which differentiate staff members' roles and responsibilities; (3) a personloading chart which illustrates the level of effort devoted to each task by the various project staff members; (4) a description of the relationship of the project team to the grantee and the funding agency; and (5) a description of the relationship of the project team to other individuals and organizations who will be involved with the project including consultants, subcontractors, and advisory committee members.

CRITERION V-B The management plan relates to the project objectives and activities.

The plan should provide a direct relationship between the management procedures, implementation of project activities, and the attainment of project objectives.

CRITERION V-C A realistic time schedule for starting and completing each of the project activities is provided.

The time schedule should be realistic and attainable even though it may be somewhat tentative. Step by step procedures with starting and ending dates should be clearly diagrammed for each project activity in the form of a Gantt chart, PERT flowchart, or other diagramming mechanism.

CRITERION V-D •The project schedule allows sufficient time and effort for planning and start-up.

All necessary elements for project implementation should be carefully planned and in a state of readiness before delivery of services begins. This includes: (1) the hiring and training of staff; (2) acquisition of adequate facilities and supplies; (3) establishment of a recordkeeping system; (4) establishment of an accounting system; (5) provisions for collecting baseline data for the formative and summative evaluations; (6) establishment of relationships with cooperating individuals and organizations; and (7) establishment of criteria and methods for choosing project participants and comparison groups (where applicable).

CRITERION V-E An appropriate recordkeeping system for project management is proposed.

Plans for an efficient and well-integrated recordkeeping system should be outlined so that all necessary information is documented. Plans may include the design of new forms, the use of computerized data systems, and production of reports.

CRITERION V-F The management plan addresses transitional activities required for the survival of the program or use of its products following conclusion of demonstration funding.

Activities required for the transition of the program from grant funding to incorporation into the ongoing educational system should be outlined. The plan should address such things as: (1) acquisition of alternative financial support; (2) establishment of liaisons necessary for transition; (3) any necessary reallocation of project personnel, facilities, equipment, and/or materials; and (4) relocation of records, if necessary.

CRITERION V-G Total project costs are reasonable in relation to size, scope, duration, and anticipated results of the project.

Budget figures should be reasonable and realistic for the scope of the project. The budget should be adequately presented and the expenditures justified as they relate to the proposed objectives and outcomes.

CRITERION V-H Budget line items are appropriate for carrying out project activities.

The proposed expenditures for each activity should be appropriate and adequate for the activity and the contribution the activity makes to the total project.

CRITERION V-I The proposal provides a plan for the documentation of costs to facilitate replication by potential adopters.

Plans should be made to maintain cost data so that reports can be made by per pupil and total activity costs.

CRITERION CATEGORY VI - EVALUATION

CRITERION VI-A The proposal includes a preliminary plan for the formative evaluation of the project.

Provisions should be made in the proposal for using formative evaluation as a management tool. The proposed formative evaluation plan should establish parameters for reliably relating processes to outcomes so that procedures can be refined and replicated.

CRITERION VI-B A preliminary plan for an appropriate recordkeeping system for the formative evaluation is outlined which documents project processes and effects.

Plans for establishing a recordkeeping system for formative data should be outlined. Formative data should be systematically and efficiently collected and recorded so that it is easily accessible, interpretable, and usable.

CRITERION VI-C The proposal provides a preliminary plan which establishes the parameters for a technically sound summative evaluation including appropriate preparation for followup.

Provisions should be made for adequate evaluation of the effectiveness of the project and for determining the extent to which objectives are met. The evaluation design should include the collection of outcome data and provisions for the collection of followup data approximately one to two years following completion of the grant period even though the demonstration project evaluator may not be responsible for the collection of the followup data.

CRITERION VI-D The proposal includes a preliminary plan for a recordkeeping system for documentation of results and identification of participants for collection of followup data.

Plans for establishing a recordkeeping system for the summative data should be outlined. Outcome data should be systematically and efficiently collected and recorded so that it is easily accessible, interpretable, and useable. Records should include the evaluation methodology, criteria for the selection of project participants and comparison group members (if any) for the followup, baseline data, pretest/posttest, and other relevant data for judging project effectiveness. Tentative dates when data will be available should be specified.

CRITERION CATEGORY VII - COMMITMENT OF APPLICANT ORGANIZATION

CRITERION VII-A The proposal includes a written statement from the applicant organization and cooperating institutions which specifies the type and amount of support they will provide to the project.

The type and amount of support the applicant organization and cooperating institutions will provide to the project should be specified in writing. In addition, conscious and overt support throughout the applicant organization management should be indicated.

CRITERION VII-B The proposal includes a written statement from the applicant organization which provides evidence of commitment to future funding and/or use of project generated products and practices after the conclusion of the grant period.

A commitment of future funding and/or the planned use of project generated practices and products should be provided by the applicant organization in writing in the proposal.

CRITERION CATEGORY VIII - DISSEMINATION PLAN

CRITERION VIII-A Dissemination of information to encourage utilization of the developed practices and products is a project objective.

Dissemination of information about the project which encourages others to adopt the program in their own setting should be stated as a measurable project objective.

CRITERION VIII-B The proposal includes a dissemination plan which identifies procedures, target audiences, and source(s) of funding for demonstrations and dissemination.

The dissemination plan should identify potential users of the project practices and products, and enumerate the dissemination strategies that will be targeted to the various users audiences. Source(s) of funding and a plan for keeping adequate records of potential adopters for followup purposes should be specified.

CRITERION VIII-C The dissemination plan provides for the demonstration of exemplary features of the program during the last phase of the grant period.

The dissemination plan should include provisions for exhibiting the demonstration project in its own setting to allow potential users to observe it in operation, examine evidence of its effectiveness, and judge its potential use in their own educational setting.

CRITERION VIII-D The dissemination plan should include an outreach approach and a combination of informative-awareness activities such as newsletters, seminars, conferences, etc. which will be useful to potential adopters in deciding whether or not to replicate the program.

Dissemination activities should reach out and employ information saturation strategies to heighten the awareness of potential new users rather than simply relying on others to respond to the demonstration project. The dissemination literature should be attractive, but not necessarily expensive, and include the kinds of information that potential users need to make a decision about adoption. The literature should include, but not be limited to, project objectives; description of target audience(s); program operations and services delivered; expected project effects; staffing requirements including position descriptions and qualifications necessary for filling these positions; training requirements for staff, teachers, and others; required facilities; required materials; and expected operating costs and per pupil costs.

CRITERION VIII-E The dissemination plan should provide for implementation support to new users.

The dissemination plan should provide for training and technical assistance to meet the needs of different persons.